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By-Fall, Charles; And Others

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This two-part manual for college teachers of education is designed to provide information about individualized instruction along with resources for teaching a unit on it. Part 1, a general introduction to individualized instruction in teacher education, contains discussion of background historical development in the area of independent study; notes on the Inter-University Project in Teacher Education with full description of the basic five-year design at State University of New York at Buffalo (which emphasizes individualization of the instructional process at each level, intensifying that focus in the independent study practicum during the senior year); and presentation of the general philosophical basis for individualization including lists of program objectives in four areas: overall objectives, individual and specialized competencies and behaviors, attitudes and understandings, and independent study objectives. Part 2 is a pre-planning resource unit which contains notes on student-instructo r planning; a list of 91 "desired outcomes" for individualized study programs; 296 "content outline items"; 85 suggested activities for preservice teacher education students plus 168 more for use with students "working with pupils in schools"; and a list of instruction materials including three films, 25 periodicals, and 61 books. (JS)

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INTER-UNIVERSITY PROJECT ONE

PUBLICATION SERIES

INDIVIDUALIZED INSTRUCTION IN TEACHER EDUCATION

Part I

Prepared by CHARLES R. FALL

Professor, School of Education

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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DIRECTOR

Robert S. Harnack
Professor of Education

PROJECT ONE STAFF

H. Warren Button
Associate Professor of Education

Charles R. Fall
Professor of Education

Adelle H. Land
Professor of Education

Charles K. Wright
Instructor in Education

ADVISORY COMMITTEE

Milton C. Albrecht
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Professor of Education

Robert H. Rossberg
Professor of Education

Robert S. Fisk
Dean, School of Education

Single copies of this publication are available from:

State University of New York at Buffalo
School of Education - 220A Foster Hall
3435 Main Street
Buffalo, New York 14214

FOREWORD

Having pre-service teacher-education students truly learn and actually practice individualized instruction has been a primary purpose of the Inter-University Project in teacher education at State University of New York at Buffalo during the past five years. Individualized instruction, per se, has been the key note of this project. Staff cooperative planning has emphasized individualization, the program has stressed this format of instruction, the instructors have tried to "practice what they preach," and this publication tries to reflect that vital concern.

The material which follows, as well as Part II of this publication, which is a resource unit, was prepared for college teachers of education who wish to learn about individualization of instruction in teacher education and who wish to continue to improve their teaching in this difficult area. What follows should be read carefully before a college teacher plans a teaching unit entitled, "Individualized Instruction."

The lack of sophistication regarding individualized instruction is enormous. We hope, sincerely, that this publication can help faculty members plan teaching-learning situations for individual pre-service teacher-education students.

Robert S. Harnack
May, 1966 Director, Project I

INDIVIDUALIZED INSTRUCTION IN TEACHER EDUCATION

There has been widespread and continued interest throughout Higher Education in developing designs for incorporating independent study efforts into programs for college students. Various approaches have been undertaken in an attempt to meet the educational needs of individual students.

A Ford Foundation supported project in Teacher Education, stimulated a study in depth of the concept of Individualized Instruction. This study has indicated some possible activities which can be directed toward the improvement of the program through which prospective teachers are prepared for educational service. Since the results of the analysis and consequent program developments have implications beyond innovations added to local programs, it would appear that efforts to describe them in some detail should be undertaken.

In order to put the description in a proper setting, this report summarizes some of the background developments in individualized instruction, outlines experiences in individualized instructional efforts at the university, notes the pattern of teacher education out of which the many innovations have come in the history of the School of Education and describes the particular project which has stimulated a variety of individualized instruction approaches. From such a background description, the individualized instructional efforts and particularly the independent study activities can be seen as integral features of a total institutional effort to continuously improve its programs for the preparation of teachers.

Background Developments

Throughout the history of educational endeavor attempts have been made consistently to orient activities to the needs of individual students. Schools and colleges have always been concerned with efforts to fashion experiences in meaningful ways for the reciepients of instructional programs. In earlier historical eras the complexity and the enormity of the task had little of the magnitude apparent in institutions today, yet there is little evidence of outstandingly successful efforts in the past upon which programs of modern scope can be built. Though it would be most difficult to accurately identify a specific time when independent study was introduced as an organized program element it would appear that it has had a long and creditable career. Certainly we can identify independent study in the earliest beginnings of our own country. Perhaps one of the most basic reasons for this can be attributed to the fact that this was the only form of advanced educational opportunity that was available to interested students in this country.

The earliest development of independent study, identified as such, seems to have had its roots in graduate schools of the eighteenth and nineteenth centuries. As a result of its apparent effectiveness many undergraduate programs initiated programs of independent study. It must be noted, however, that basically independent study as a technique to be utilized in the undergraduate programs was designed to function only for those of exceptional ability.

The concept of the dissertation, thesis and eventually the term paper all appear to be attempts at providing experiences in independent study. As a general rule these tend to take the form of a culminating activity in which the student draws together all areas of his study, under the guidance of an advisor, into a unified report. It was hoped that these would not only contain factual information but rather would afford the student an opportunity to draw conclusions and relate findings of his study to other areas.

Another factor in the development of independent study activity was concern on the part of institutions that students could not select courses or investigate areas of study that were of interest to them. Independent study programs could be used to broaden the scope of established courses or to extend the vistas of study to include areas in which students were interested but for which no organized course offerings were available. Further, it became obvious that the independent study approach permitted students to investigate several different areas simultaneously, thus in reality, eliminating many classroom courses heretofore considered essential.

Since the turn of the century there has been considerable discussion concerning the concept of individualized instruction and the need for it in our educational system. Independent study appears to be one of the primary vehicles for promoting individualization of instructional activity. By 1920 independent study was well established as a form of individualizing instruction. In the years since that time there have been greater utilization of the concept along with many revisions of its principles.

Common Approaches to Individualized Instruction

The concept of Individualized Instruction has wide acceptance in educational institutions today and efforts to broaden the scope of application are constantly being made. Basically these efforts fall into three general categories as they are developed into organized programs. These are honors programs, tutorial programs and independent study programs.

Honors Programs

Generally speaking, honors programs have been organized to provide broadened and extended opportunities for superior or gifted students. Though actual program arrangements differ among institutions, the basic concepts and organizational features are common. Selected students--those who meet the grade-point criteria for admission--are permitted to program a portion of their work through independent study arrangements. Fundamentally, the independent study aspect is structured as individual project work under the supervision of an instructor qualified in the area of emphasis.

Several major criticisms have been reported of these efforts.* That these efforts are apportionately confined to a small number of students and a particular segment of college population is self evident. It is also apparent that the independent study emphasis of honors programs is quite narrow in scope and restricted in quantity. Thus as a general approach to individualizing instruction, honors program attempts have not served a widespread purpose in educational institutions.

Tutorial Programs

Many institutions have promoted programs of individualized study organized around a concept of tutorial activity. Though this is generally similar to an honors approach in that students are selected as being academically superior and are permitted to engage in independent study endeavors, it is more constricted in scope of investigation and directed in terms of faculty supervision. Primarily, it is a plan in which superior students are permitted to work directly under the supervision of a faculty specialist to undertake the study of a specified area of work. Here again the inherent constrictions on the number of students eligible to participate and the restrictions on breadth and scope of study endeavor, renders such programs somewhat ineffective as institutional efforts to stimulate independent study and creative approaches on the part of the student clientele.

Independent Study

The term "independent study" is coming more and more into common usage to describe broad-scale attempts to provide for individualization of instructional efforts. Since honors and tutorial programs have typically involved organizational features with inherently constrictive and restrictive features, these have been supplanted in many institutions by the more extensive independent study endeavors.

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* Summarized cogently in: Winslow R. Hatch and Ann Bennet "Independent Study" New Dimensions in Higher Education Bulletin No. 1, Washington, Office of Education, U.S. Dept. of Health, Educ. and Welfare, 1963, pp. 4-6.

Though the caption covers programs of extremely wide variation and numerous emphasis, some elements of commonality are identifiable. Of greatest importance perhaps, is the effort to broaden the scope of programs to permit large segments of the student population to participate. This is in response to the apparent restrictive quality of honors and tutorial programs and the realization that superior academic status is not the prime predictor of possible success in independent study activity. Nor can the restrictions inherent in high grade-point qualifications provide evidence of competence to engage in independent study with effective application. Hence modern independent study emphases are encouraging the availability of this kind of activity to as broad a segment of the student population as is possible to accommodate.

A second feature of independent study is to extend opportunities through a wider scope of the university program. This is done both vertically and horizontally--that is, from freshman through advanced graduate study and throughout the areas of offerings within the total institutional program. Here again there is a reaction against the restrictive character of honors and tutorial programs. Typically these were programs encompassing only the upper levels--either graduate work or at the most, the upper divisions of an undergraduate sequence. As a result students were deprived of early introduction to independent activity and were likely to be structured in their study patterns so as to accommodate very poorly to the expectations of independent effort. Since the introductory phases of college life involves a fairly definite break in the study life of students, it is felt that this is the most appropriate time to emphasize an independent and individualized approach. Becoming adjusted to a passive role through conventional methods in the freshman and sophomore years has a tendency to make later independent study work more difficult, distasteful, and meaningless.

A third characteristic of current independent study patterns, is the attempt to organize learning activity around needs, interests, and concerns. Former programs of the honors and tutorial type were structured with definite course-work character. In most instances the only "independent" quality was that the student was expected to follow the course program alone rather than in the company of others through lectures, discussions and/or laboratory activities. This present approach involves a more radical and comprehensive reorganization of the college program in an attempt to structure instructional activities around student interest areas and in terms of the contemporary needs of individuals preparing for effective participation in modern social contexts.

Further, independent study emphases of recent construction are structured around independent activity. Where in typical honors and tutorial programs, study was constricted to definite instructor-directed components and to specific outlines of areas to be covered, the truly independent study approach emphasizes a different orientation. In this sort of program students are given the opportunity to encounter problems about which they have concern and to investigate the available resources for obtaining the necessary knowledge and information that can be used in its solution. In addition they are expected to apply the information obtained and develop conclusions which are warranted by the material available. In such a process, the instructor provides guidance and acts as a resource person in efforts of the individual to really apply his own energies to the solutions of problems with which he has become involved.

Need for Individualization of Instruction

It can hardly be denied that there is a need for continued attempts to build programs of education at all levels that are directed toward adequate individualization and focus upon the learner as a functioning organism. The concept of "individual differences" has long been a central reference point in educational parlance. However, few actual programs have reflected any great attention to individual orientation in instructional activity. The time is at hand when implications can no longer be ignored and major efforts must be forthcoming to evolve appropriate individualized learning processes.

Several current conditions point up the urgency of the need. Perhaps the most obvious and crucial element is in the revolutionary nature of changing conditions and exploding conditions apparent in knowledge areas today. In cultures of a non-changing character, a program of structured and past-oriented education can very well suffice. In radically changing times the comfort of ageless principles and universal truths is an artificial one and these cannot be relied upon to provide effective guidance in the solution of contemporary problems. Thus it is imperative that instructional endeavors reflect an understanding of the revolutionary nature of present conditions and the inadequacy of procedures directed toward the transmission of knowledge.

A second factor that must be faced in program design is the extremely complex nature of social and cultural life today. In stable cultural contexts, educational institutions can be developed on concepts of transmitting a cultural heritage and inculcating the young with the proven principles of social intercourse around which the society operates. A program of education of this sort in complex and changing cultural climates can only contribute to confusion and personal alienation from the "mainstream" of endeavors.

Such comments lead to a third feature of modern circumstance that is calling for redesign in educational activity. This is the growing tendency toward personal alienation in various aspects of modern life. Anthropologists and sociologists are continually drawing attention to the major features of existing cultural settings which are alienating large segments of populations from the concourse of social endeavor. And, educational programs which are not rooted in the features of the times can only contribute to continued alienation where there is actually needed an intensive effort to assist students to make some meaning out of the lives of which they are a part and to see themselves as integrally functioning aspects of a total social organization.

Finally there is the factor involving concepts of the learning process which must be considered when assessing a need for individualization of instruction. Modern investigators are universally agreed that learning is an individual matter and it is only as instructional endeavors stimulate activity on the part of the learner himself that effective contributions can be made to his education. It can be agreed that this does not mean that each student must be taught directly by a single teacher, for this would lead to impossible conditions in educational institutions. It must mean however, that educational activity be organized in a fashion that affords the individual an opportunity to see meaning in the process and to organize his interactions with the educational environment in a manner which extend and deepen these in terms of his unique patterns of understandings.

Thus, educational endeavors are imperative which can serve the needs of modern living. They must be directed at releasing the full human potential represented by every individual. To do this programs must be designed in response to an awareness of the ever-changing features of life and of the knowledge and understanding which is necessary to make such a life meaningful. There must be an understanding of the ever-growing complexity of the cultures of which learners are a part and of the need for a kind of education that will assist the individual to understand his social environment and contribute effectively to its on-going processes. In addition, educational designers must be cognizant of the tendency toward alienation of the individual from the cultural order into which he has been thrust and must include in the pattern of education the kinds of experiences which will provide the opportunity for the individual to become integrated into the total operational endeavors of his social order. And, finally, instructional design must reflect an awareness of the nature of learning and the extremely direct individual emphasis that must be characteristic of all learning activity.

Individualized instructional emphases are means through which many of these features can be incorporated into an instructional design. It is a process which envelopes the individual as the central feature in the learning process and is based upon a concept that learning is an individual matter. Further, through patterns of individualized instruction students can be made aware of the need for continued learning and the necessity for constant examination and analysis of matters with which they become concerned. Since it is apparent that "information" as knowledge cannot be considered as unchanging, individualized instructional processes provides the basis for the location and evaluation of new information as it becomes available and the incorporation of this into the working resources with which continued experiences can be met.

The Inter-University Project in Teacher Education

Thus it was into a setting characterized by a spirit of inquiry and experimentation that a new dimension of cooperative endeavor was introduced with the development of the Inter-University Project. For the first time in the history of the institutions involved, a plan was conceived which envisaged the harnessing of the potential of a group of institutions to focus upon problems of teacher preparation. In this manner it was anticipated that the strengths inherent in the variety of individual campus resources could be brought to bear in an intensive and extensive attack upon professional preparation in the area of school service personnel. A sizeable grant of funds was made by the Ford Foundation to support the initial phase of what was hoped would be a continuing enterprise.

Of value in this context are the major purposes of the project, for these reflect the kinds of concerns being expressed for greater cooperative involvement in the processes of professional preparation.

a) Cooperation among the Participating Institutions.

Fundamental among the intentions of the Inter-University Project was that of encouraging and facilitating interaction among the participating institutions. As was indicated previously, this added a new dimension to the variety of cooperative relationships deemed necessary for the development of effective teacher education programs. In line with this purpose, all activities of the individual campus programs were cleared through effectively functioning channels of communication. The resulting enrichment to each program, though difficult to measure with exactness, was nevertheless apparent from even informal analyses of the programs. Project administration was also carried out through a pattern of cooperative relationships and reflected an active participation by administrative officials and faculty members of each campus.

Committee groups consisting of representatives from each campus directed the course of each phase of project activity. Through these there was constant interaction of faculty members from participating schools and an interchange of ideas which has given vigor and vitality to endeavors.

Teachers and administrators of participating public schools have also been involved in "total-project" activity. Again a new dimension has been the result, for this provides a forum for interchange which includes a range of participants seldomly available--at least in terms of directed activity within a project enveloping this variety of institutions. Here again, there has been induced an invigorating climate for the total responsibility for preparing teachers has been shared by representatives from all of the elements having a stake in the process.

b) Involvement Within the University.

Although determined efforts to encourage wide university involvement in Teacher Education have characterized the approach in State University of New York at Buffalo throughout its history, the Inter-University Project stimulated greater emphasis in this regard. A major commitment of the project was to "select a group of ...... students ...... who are characterized by strength of subject matter background, high scholastic ability, and desire to teach in senior high schools" and to find ways of "... developing an improved sequence in professional education studies, coordinating work in education with subject matter and allied disciplines ..." That such could not be done without complete involvement of other campus' personnel was immediately evident. So, the use of established procedures and the establishment of new ones for this purpose was given high priority.

A functioning Teacher Education Coordinating Committee comprised of representatives of the various campus elements involved in Teacher Education was used as a steering committee for project activity. This signaled the importance of university-wide participation and set the pattern of operation in project matters. It also afforded a high-level administrative sanction to project endeavors and channeled to the various university divisions, information and concern for improved effort in teacher preparation.

Members of representative disciplines had typically been involved in methods and materials of instruction phases of the regular teacher preparation sequence. These instructors were encouraged to engage in project deliberations and were drawn into activity at every point. As project efforts have unfolded, these have been some of the most active and contributive members of those involved.

Perhaps the most constructive aspect of Four-University Project activity as it has evolved at State University of New York at Buffalo has been the effective integration of new design into the on-going teacher education program and the use of regular staff in various aspects of experimental endeavor. This has contributed to an interaction of program elements in a fashion that insures the incorporation of tested innovations into the general program of teacher preparation. It also has provided a constructive basis for "springing off" into unique efforts, since many aspects of present program activities offer the support with which to do so. As was indicated earlier, the teacher education program has been typified by a spirit of innovation and the design is of unique character giving an impetus to experimentation not common in educational circles today.

c) Involvement of Public School Personnel.

The laboratory for application of theoretical concepts supplied by the actual classroom situation is an extremely important element in a total program of teacher preparation. In fact, in a program designed for deliberate integration of theoretical and practical aspects, the student teaching center is a primary resource. Thus, a close cooperative relationship is imperative between university activity and the laboratory setting in the public schools.

The necessity for close cooperation was understood as the Teacher Education Project was planned and efforts were made to insure a working relationship that would afford constructive efforts on the part of all concerned. Administrative officials and faculty of chosen center schools were included in all planning efforts and were expected to continue involvement throughout project activity. Center schools were considered extensions of the university for these laboratory purposes and teachers were included as active members of the university faculty in the teacher education program.

It was anticipated that the idea of close relationship would mean more than an arrangement for student teaching experience in a public school setting, and it has worked out as expected. Teachers and administrative officials are included in all phases of project development becoming involved in many activities typically considered of concern only to campus personnel. Likewise, many activities reserved solely for campus treatment in common teacher education program arrangements have been moved to the actual teaching laboratory of a public school situation.

The Basic Design at State University of New York at Buffalo

The basic purpose of the Inter-University Project in Teacher Education is the "study and analysis of the five-year collegiate education of secondary school teachers in the effort to develop a total program giving greater direction and coherence to the studies pursued by those entering teaching and resulting in greater maturity in thinking and working with ideas." In fulfilling its commitment to this purpose the project staff has developed its plan to encompass the full five-year sequence. The major emphasis in each phase is to bring meaning to the experiences engaged in by focusing upon inherent implications and applications for the teaching process. The entire scope of general, general professional, and special professional education is structured so as to give emphasis to the integrating focus of actual teaching endeavor.

Generally, the, pattern which has evolved includes typical five-year increments each having a focus around some sort of professional activity or responsibility. As freshmen, students who are selected for the program are advised to enroll in a course program structure to encompass their major field of study and some emphasis upon psychology, philosophy, sociology and anthropology for the cultural breadth to support professional work.

As a part of the second semester program, each student participates one hour per week in an individual study program in a local secondary school. The collegiate students work with a high school staff member who is conducting an individual study program for high school pupils. The Collegiate student is assigned to a high school pupil in order to observe this high school pupil in an individual study situation, to help this high school pupil to facilitate his individual study, and to meet with his assigned high school preceptor approximately once every third week to make a report and receive guidance related to this individual study program. For this, no college credit is given.

The obvious hope of this professional activity revolves about three ideas: (a) that as a result of these environmental experiences the collegiate student will develop a set of needs, interests, wants, and desires which will encourage him to explore the foundation areas of professional education as well as to recognize the importance of his specific subject matter discipline as this discipline relates to the education of a high school pupil; (b) that the collegiate student will observe, understand, and develop behavioral patterns which emphasize the numerous professional decisions made by a teacher as he guides the learning of an individual pupil; (c) that not only will the collegiate student seek help from his preceptor in the local high school in regard to professional education, but will seek help from his subject matter field instructors in regard to the reorganization of that subject matter field as it might influence the learning of a high school pupil.

Sophomore programs are organized with a general emphasis similar to those of the first year. Continued focus in the major area of study is recommended and broad general backgrounds encouraged. Students are also advised to continue with some emphasis in psychology, sociology, philosophy and anthropology; as basic to later professional work in which they will be engaged.

In the professional phase, during the second year the collegiate student in his first semester is invited to visit one secondary school per month in order that he might become acquainted with the total operation of a secondary school. Secondary schools are chosen which help the student observe the large metropolitan school, the small rural school, as well as the various phases of secondary school operation including guidance and counseling, administration, curriculum planning and development, extracurricular activities, and the like. No college credit is assigned to this experience.

In the second semester the collegiate student is assigned to a teacher in a local secondary school where an instructional program exists which encompasses small group instruction. Here the student will observe the small group discussion in operation. During some phase of this operation the high school teacher (preceptor) will encourage him to be a discussion leader for a group of secondary school pupils. Obviously, the collegiate student will again be working within his subject matter field at the local high school. The collegiate student will observe and participate in this activity approximately twice a week and will meet with his preceptor at least once every two weeks. (Two credits)

In keeping with the gradual introduction of the collegiate student to teaching, experience with small groups seems to be the logical next step. In this type of situation the collegiate student will have the opportunity to observe high school pupils as they try to discuss and understand something of their subject matter field. At the same time the collegiate student should gain insights into the intellectual characteristics of this age group and gain some behavioral competence necessary for directing a teacher-led small group discussion.

At the third-year level students are expected to emphasize the major field of study in an attempt to round out the subject matter specialty. It is hoped that major professors responsible for the courses in which prospective teachers enroll will emphasize those teaching procedures. It is also desired that a variety of classroom techniques will be demonstrated and that the vast resources for enriching teaching in any area will be used.

Professional emphasis is structured in a six-credit sequence organized around the theme of American Schools in Their Social Setting. Community participation in local agencies, visits to board of education meetings, P.T.A. activities and other school and community endeavors are used as focus for the theoretical exploration of this area.

In the fourth year specific emphasis is continued in the student's major field of study in the College of Arts and Science. Again, it is hoped that the major subject matter field professors responsible for the education of these students in the experimental program will emphasize those teaching methodologies which will serve as excellent examples for the prospective teachers. To that end, it is desired that these professors use classroom techniques, individual and small group procedures, and instructional materials which include such concepts as team teaching, small group discussion, programmed learning, closed and open circuit television, and the like. Also, at this point, block programs of studies are introduced.

In the professional phase at this stage, the collegiate student begins his student teaching activities in a designated Teaching Center. During the first semester each student is expected to participate in student-intern teaching each afternoon during the week. Mornings are used for university study. During the second semester the student is assigned to a Teaching Center for an all-day-block schedule of eight weeks.

During the first semester students participate in an integrated theory element--the Professional Unit in Education--in which the problems of teaching are explored in terms of the theoretical foundations basic to educational practice. In the second semester this study is continued in an independent study relationships with attempts to involve teaching center personnel in the group exploration of problems which students have selected for independent analysis and research.

The fifth year program is a combination work-study experience which is essentially a logical extension of previous work. Students are assigned as half-time teachers in selected public schools as regular teacher-interns. Each intern is closely supervised by local school personnel and by university supervisors. For the study aspects students are enrolled in seminars which deal with their professional problems as these are reflected in actual teaching experience. These seminars are conducted by teams of subject-matter, educational foundations, and professional education specialists. As in other aspects of the project operation, the resources of the cooperating school are brought to bear on the seminar experience, by involving the local school supervisors and teachers in analysis of problems encountered.

Individualized Instruction Emphasis at Every Level

As is indicated in the general description, emphasis upon individualization of instructional processes was considered necessary at each level in the total five-year structure of the project. At the freshman level, students were enrolled in an individual study program in one of the center schools where the responsibility was to work with a high school student in an individual study activity. In addition, the freshmen students were expected to meet in a bi-weekly seminar with a college staff specialist with the major emphasis of the work being analysis of individual study processes.

This was organized as an attempt to familiarize teacher preparation candidates with individual study procedures early in their collegiate careers. It also served several other extremely valuable purposes in relation to the candidates own preparation. Such experiences served admirably to illustrate the sorts of competencies needed to work with students in teaching-learning situations and thus provided a basic ground-work upon which further preparatory experiences could be structured. Working with an individual student in an actual school situation provided a laboratory experience out of which the teacher preparation candidate could come to understand the importance of his subject-matter specialty as a medium of instruction and as a consequence, build more effective understanding out of subsequent classroom experiences in his college program. In addition, this sort of individualized instruction approach provided an actual experience in the kind of processes a teacher must become proficient in using if upon entrance into teaching service he is to be expected to conduct effective teacher-learning activity.

In the sophomore year, project students engaged in individualized instructional processes of two basic kinds. During the first semester, they were expected to visit one secondary school per month to become acquainted with the total operation of a secondary school. A variety of school situations were included in this study as were the many aspects of school activity with which the individual preparing for teaching should become familiar. During the second semester, an emphasis was placed upon systematized study of small group instructional processes. Here again, each teacher preparation candidate was assigned to a secondary school situation for actual participation in small group teaching activity and in the study of the processes of small group instruction through conference work with high school personnel and seminar activity at the university.

During the Junior year the teacher preparation candidates were enrolled in an organized course on school and society. Inherent in this course pattern however, the individualized processes were continued. Each student was expected to participate in a community agency leadership function and visit Board of Education, P.T.A. and other community educational endeavors. Reports of these experiences were used as the central focus of the course work in which the students engaged.

In the senior year, in addition to the organized practice teaching activity and the integrated professional theory course, project participants engaged in an Independent Study Program in the Educational Foundations area. To this a following section will be devoted, for it served not only as an extremely significant culminating experience, but also evolved into an extremely interesting and exciting instructional process with broad implications for teacher preparation in general.

General Philosophical Basis

As is characteristic of all instructional endeavor, the teacher education program has basic structural support in a philosophical orientation. The general nature of this is evident from preceding descriptions, but for purposes of an analysis of the independent study program it is necessary to provide some explanation of the specific theoretical elements upon which such efforts are based.

(a) Concepts of learning.

Of primary importance in assessing the accomplishments of any endeavor is the recognition of the concepts of learning upon which the activities are based. In the teacher education project it was accepted that learning is a process of individual activity--individual activity that involves a "reconstruction or reorganization" of experiential components. Central to any such endeavor is a problem circumstance. That is, for learning to take place, an individual must become involved in a situation in which there is concern for, and an interest in, the inherent features of the circumstances. Out of this involvement there must come some need to reconstruct or reorganize elements in order to continue in the directions desired. Thus, learning was considered to be a process of individual experiencing--experiencing in analytical, problem-solving fashions. The knowledge, skill, attitudes and understandings to be acquired through a program of teacher preparation must be promoted through a program designed with these concepts as a base.

b) Integration of Elements of Experience.

A second set of theoretical elements basic to the teacher preparation program and reflected in the independent study segment had to do with an interpretation of the interrelationship of the elements of experience. As is apparent from the description of the total teacher preparation program, efforts have continuously been made to provide an integrated pattern in the offerings in the area. This has resulted from a conviction that experience, to be contributive to the continued development of an individual, must have inherently interrelated dimensions. The typical separation of elements of an educational program into separate, distinct, and unrelated course-work activities is miseducative in its effect. There is a tendency as a result to segment educational experience in a way which constricts learning possibilities.

In terms of this position, each level of project work was organized with a focusing theme so that even though programatic integration into all areas of subject-matter experience was impossible, there was still some prospect of integration on the part of the individual through a central theme relating to educational endeavor. More specifically in the professional elements, an actual integration of subject matter elements had existed in the Professional Unit in Education and it was possible to capitalize upon this for project purposes.

Most importantly in relation to the Independent Study component, it was possible to extend the integrative features of this already existing pattern in the Professional Unit into a more comprehensive integration encompassing not only the theoretical elements but also incorporating the practical experience of the student teaching activity. In this way, the actual experience of teaching served as the focus around which an examination of theoretical problems would be conducted. As a result, what it appeared that a teacher needed to know could be discovered from actual experience and a design for obtaining this could be developed from a wholehearted commitment on the part of the learner.

c) Teacher Competency as the Determiner of Necessary Preparation.

Another element of theoretical disposition is suggested by the above. This is the commitment of the program to the concept that it is the competencies required of the teacher that should be used to determine the nature, scope and content of the preparation program. Though this is not an uncommon concept, it is seldomly applied to the design of patterns of preparation. As a guiding principle, it would suggest that analysis of what a teacher must be able to do are the basis upon which a determination can be made of what a teacher must know. From this, relevant knowledge areas can be explored for contributions that can be supplied and, along other possible supporting activities, these can be woven into a comprehensive series of program experiences. This can be outlined as follows:

I. Teacher Competency
What a teacher needs to be able to do--the decisions a teacher must make, determines:

II. Knowledge
What a teacher must know in order to be able to do, which in turn, suggests:

III. Basic Concepts
The basic concepts from areas of knowledge which could be useful and the:

IV. Teacher Preparation Experiences
Activities which should be designed to promote effective learning in the areas desired.

Typically teacher preparation programs have been designed on the completely different premise--that of assuming certain knowledges were necessary merely because they represented elements from basic disciplines. Efforts in this project, however, have been to assess what a teacher should be competent to do and determine from this the knowledge most suited to effective function. Upon the basis of this analysis, guidelines are evident for the establishment of appropriate program elements in the students' preparation for teaching.

To follow such a theory completely would require a reorganization of a total university pattern, and this would be impossible under most circumstances. However, it is possible to apply well-developed theoretical constructs to portions of a program where this is practicable and do so with constructive results. In the Inter-University Project this was done and the Independent Study Program was an example of a pattern of experiences that were designed to develop the competency to teach through activities focused in actual instructional situations.

d) Instruction of a Variety of Individuals.

A program of preparation must of necessity involve an interaction of a variety of individuals. This is true on several levels. The program itself must reflect planning efforts in which elementary and secondary school personnel, university specialists from subject-matter as well as professional education areas, and students of all classifications have played a part in the design. More importantly, however, is the need for the student in preparation to come in contact with a variety of individuals in organized and productive fashions.

The teacher education project has encompassed activities in which this theoretical concept has been applied at every level. The Inter-University Project itself is an outgrowth of the involvement of large numbers of representatives from several campuses. The design which State University of New York at Buffalo evolved as appropriate for its particular purposes came out of conferences involving all of the elements suggested. And each level of activity in the program is structured around an opportunity for the student in preparation to become involved in learning situations in which there is a variety of representation of academic, administrative and community officials.

Teacher Education Project Objectives

In general the preceding provided the

basic theoretical orientation around which the Teacher Education Project was organized. From this a set of specific program objectives was formulated which served as the focus for efforts as they evolved. These were as follows:

I. Overall Objectives

1. To provide the prospective teacher with exploratory experiences with children so the student can get the "feel" of teaching and realize it is a challenging, but demanding, vocation.

2. To provide actual exploratory experiences as a student progresses to enable him to relate theory with practice; to try out what he is learning; to explore further in the field.

3. To better synthesize ideas, content and practice so that everything falls in place; that is the training of the student is interpolated into the context in which it will be used.

4. To provide opportunity to understand the changes in role, in type of control, and in methods that technology is bringing to teachers; and to enable teachers to accept new ideas, new organizational patterns, and new ways of managing the education process.

5. To provide, if possible, student teaching experience that encompasses full days and over a long enough time range to:
    - (a) Develop skill in long range program planning and pupil assignment.
    - (b) See, at first hand, the physical and emotional limitation of both pupil and teacher in a full time program.
    - (c) Ensure time for planning with supervising teacher.
    - (d) Share responsibility for necessary record keeping and gain experience in keeping them.
    - (e) Carry on observation in various areas of the school other than those directly related to the student teaching experience.

II. Individual and Specialized Competencies and Behaviors

1. Be able to participate effectively in group dynamics.

2. Be able to understand and use information gained from tests.

3. Be able to use and know the value of anecdotal records, checklists, case studies and other sociometric devices.

4. Be able to use resource units; and to find and collect teaching materials.

5. Be able to use and follow basic instructional procedures; planning; motivation; selection of class activities; provision for individual differences; and evaluation of work accomplished and pupil growth.

6. Be able to use skillfully and understand the strengths and limitations of a wide variety of instructional materials; motion pictures; film strips; recordings; tape recorder; opaque projector; overhead projector; micro-projector.

7. Be able to use skillfully the techniques of pupil-teacher planning; individual and group goal setting and individual study and learning.

8. Be able to evaluate student progress and growth toward established goals and objectives and be able to report such evaluations to pupils and parents.

9. Be able to help children plan activities that will meet individual and group needs.

10. Be able to provide classroom experiences in which pupil can develop;
    - (a) Leadership skills
    - (b) Discussion skills
    - (c) Research and reference skills
    - (d) Group work skills
    - (e) Indirect study skills
    - (f) Self evaluation skills
    - (g) Skill in setting realistic goals

11. Be able to recognize when effective use can be made, and to be able to practice the techniques of: large group instruction; small group instruction; individual instruction; group investigation and research and individual research and study.

12. Be able to reorganize subject matter content into patterns best suited to the needs of children and classroom instruction.

13. Be able and skillful in school routines: attendance; reports; administering tests; records and contacts with parents.

14. Be able to practice techniques of classroom management and classroom control.

15. Be able to identify students who have such serious problems that they need the help of special personnel.

16. Be able to speak correctly and with good pronunciation and enunciation.

17. Be able to locate community resources.

18. Be able to identify community needs which might be met in part through the learning activities of children and youth.

19. Be able to cultivate the habit of referring pupil records when pupil has a problem which the teacher needs help in understanding.

20. Be able to use effectively professional sources of help: publications; magazines and associations.

21. Be able to use pertinent research and evidence in making education decisions.

III. Attitudes and Understandings

1. To maintain an attitude of friendliness, interest in, and concern for children.
2. To understand the necessity of, and to be willing to assume responsibility for, curriculum development.
3. To understand the importance of, and the necessity for participation in in-service training program.
4. To understand and follow the established principles of the code of professional ethics.
5. To understand the role of education in society and the role of the teacher in the entire educative process.
6. To understand the role of guidance in schools and the relationship of classroom teachers to the total guidance function.
7. To understand the role of the supervisor and the administrator in a school community.
8. To understand and practice basic human relations.
9. To understand and know the principles of good mental health.
10. To acquire a philosophy of public school education.
11. To understand the role of the teacher in the field of public relations.
12. To be willing to accept a share of responsibility for decisions about the aims or objectives of the school.
13. To accept the responsibility for being consistent with other teachers in matters of teacher conduct.
14. To understand the role of the special teacher and the classroom teachers relations to special teachers.
15. To understand the total program of a school and the individual teacher's relationship to that program.

IV. Independent Study Objectives

Specific objects of overall program purposes appeared best served through independent study processes. These were accepted as the objectives toward which the program would be directed. In outline form the major ones are as follows:

A. To provide opportunities for students to examine problems of secondary education through observation, participation and readings.

   1. Focus attention on real problems encountered in actual teaching situations.

   2. Provide experiences for students whereby they can see the relationships between various problems faced in a given situation.

B. To permit students to translate their theoretical study into actual practice.

   1. Combine theory-focused and practice-focused work in a unified experience.

   2. Familiarize students with various new sources and resources applicable to the various problems to be encountered.

C. To encourage the students to more fully understand what the classroom experiences mean in terms of the student and the teacher.

   1. Encourage students to modify their concepts as a result of their study and actual experiences.

   2. Encourage teaching center personnel to work with students in identifying problems and the various approaches which might be employed to modify the situation.

D. To provide experiences in small group and individualized instruction.

   1. Provide group sharing experiences not dominate by university instructors, thus permitting further exploration of problems in addition to individual investigation.

E. To provide extensive opportunity for individual exploration of areas of concern.

   1. To encourage students to utilize all potential facilities and services in working through an identified problem or problem area.

   2. To assist students in the process of identifying and clarifying areas to be explored.

   3. To provide students with the necessary tools for keeping abreast of current thinking and changes as they apply to the overall educational program.

General Description of Independent Study Program

As was indicated in the description of the Teacher Education Project, attempts to provide individualized instructional processes was evident at every point in the total five year sequence. Perhaps the most intensive application of individualized procedures was in the Independent Study program relating to the study of the Foundations of Education as this was incorporated into an integrated instructional pattern of the senior year.

It was evident that, at the various levels, attempts were made to focus upon the problems inherent in actual school and community situations and, through an analysis and study of these, structure learning experiences that had a reality orientation and a meaningfulness that made them productive and effective. By orienting learning activity in actual functioning situations, real independent study was fostered. Students were expected to become sensitive to problems and issues within the interacting situation and were guided into the organization of these as study foci.

The application of these basic concepts was characteristic of the total program but more directly involved in the structure of activities in the Senior year. Thus this will be described in more detail.

The First Semester

During the first semester of the senior, students were enrolled in the Professional Unit in Education which was an integrated element in which the problems of teaching were explored in terms of the theoretical foundations basic to educational practice. Ordinarily, the course was organized as a large group-discussion section endeavor with presentations dominating the large group sessions and recitation activities the most prevalent section pattern. A general outline of work was usually agreed upon by all section leaders with large group activities scheduled as necessary. Since students were scheduled concurrently in student teaching, every effort was made to orient theoretical analyses in matters of direct relation to actual teaching circumstances. However, this was rather difficult with the large numbers enrolled and the nature of the organizational pattern of university activity.

However, some independent study approaches were applied for students of the Teacher Education Project by rearranging some of the aspects of the ordinary program. This was done in an effort to make more pointed the relationship between the theoretical elements with which the Professional Unit program was concerned and also to provide a "lead in" to more intensive independent study work in the second semester.

During the first semester such areas as the following are usually considered as general emphases:

1. Instructional Processes and Resources--this includes Planning, General Instructional Methodology, and Aids and Resources for Teaching.
2. Growth and Development of Children and Youth--this includes the study of principles of Growth and Development, Patterns of Growth, infancy through adolescence, Characteristics of Individuals at various levels and interest and need patterns of concern in teaching.
3. Evaluation--this includes the study of purposes of evaluation, the evaluation process, application of various evaluative and assessment techniques and the skills necessary for using evaluation processes in instructional situations.

The Teacher Education Project students were assigned as a group to one of the Professional Unit sections so that certain special activities would be organized to initiate their Independent Study efforts. Several things were done to direct their work in ways requiring individual effort and independent activity. These included:

1. Each student was asked to select a problem or a concern from the student teaching experience and make that a Semesters Project, the results of which were to be organized into a final written report.
2. The section program in the study of

Growth and Development of children and youth was organized to involve an independent study component through:

(a) Each student being expected to study students in the teaching situation in which involved and to use the actual teaching circumstance as the center for observation of behavior and the study of student characteristics.

(b) Each student was asked to prepare an individual study plan for the area. (To assist in this, an outline of topics covering the area was distributed as was materials suggesting books, references, and study resources such as observational guides.)

(c) The class schedule was revised from four fifty minute lecture-recitation periods per week to one twenty minute intensive session in groups of 4 or 5 students and one general section meeting of forty minutes each week. Each small group was expected to meet as needed outside the regular schedule and to work with each other in the study and analysis of the area topics.

The intensive small group session was devoted to continued analysis of individual study plans, progress reports of individual activity and general discussion of activities in which the group was engaging. In the general section meeting, an attempt was made to get reports from the groups, look at any problems that were being encountered, and summarize major accomplishments and plan for future activities.

The effectiveness of this pattern of endeavor was demonstrated in at least two ways. First, it was apparent from the nature of the small group and the section sessions that individuals were engaging in intensive study and analysis of the materials associated with this area. Individual reports, both oral and written, showed great accomplishments as did the reports of the groups to the total section. A second demonstration came through a more formal evaluative process which here again was organized to include as great an independent study component as possible. The class was asked to continue the pattern of endeavor in which they had been engaging in the study of evaluative processes and to use as the theme of this study their previous work in growth and development. In other words, they were to study the elements of evaluation, its purposes, procedures, etc., as these could be applied to the work they had done in the previous unit. The result of this was a student-developed pattern of evaluation which was administered to the group and the results of their work assessed through this process.

The Second Semester

With a background of rather carefully guided and directed independent study from the first semester program, and with the experience of various individualized instructional processes of the preceding years in the project, it was possible to move into a completely independent study orientation in the final theoretical element in the senior year.

For the purpose of orienting the study in actual teaching experience, the setting for the theoretical activity was moved to the Teaching Center School to which the students were assigned for student teaching. Here the section leader (university professor) and a school coordinator (a teacher from the center school who volunteered to act as an in-school coordinator for independent study program) worked together as an advisory staff for the activities. In addition, throughout this effort the administrative and service staff and the teachers in the system became actively involved in the activities. In fact, this participation became an added feature and one which had not been anticipated as such an important contribution. There was not only extremely important contributions made to independent study processes themselves, but a kind of interaction ensued between university representatives and members of the school staff that improved relationships between the two institutions and served as "inservice" experience for all concerned.

Immediately upon the opening of the semester, a meeting was held with the group--this included all of the students involved in independent study, the university and school coordinator and teachers and other school personnel who could be made available at the time. At this meeting an attempt was made to "spell out" the purposes and goals toward which all involved would strive during the period of involvement in the program. In addition a general pattern of activity was layed out for the ensuing weeks.

Essentially the plan agreed upon was the following:

1. Each student would select a particular problem or cluster of problems for concentrated attention.
2. A plan of attack would be developed for the analysis, study, experimentation or whatever approach was called for by the problem.
3. This plan of attack would be discussed and analyzed in conferences with the coordinating staff and, upon approval by all involved, would form the format for continued study by the student.
4. In order to ensure continuous opportunity for guidance in the project and for continued involvement of all concerned in the activity, two kinds of conference arrangements were established. There was scheduled a twenty minute individual session for each student bi-weekly and on intervening weeks an extended group session (a double class period) was held. In the individual conference, an effort was made to provide an extensive assessment of the students activity, his progress and his needs in terms of continued effort. In the group session there was an attempt to share the results of individual study and to use the group reactions for the guidance and direction of independent activity. Unexpected voluntary participation by school staff members expanded immeasurably the frontiers of these meetings and improved extensively the quality of work in which the students engaged. Two days prior to scheduled conferences, each student would submit a written progress report to the coordinators. This was used as a discussion paper to direct the individual and group analyses of study efforts.
5. A pattern of assessment was agreed upon in which the projects themselves and the progress of individuals themselves in the independent activity involved, were the central features.

All individual and group sessions were recorded on tape, and efforts were made to supplement the continued evaluation as the program actually evolved with analyses of the recorded conference sessions. In addition, a final reporting session was agreed upon as a time when a final report would be presented. This was to include two emphases--a description of the independent study project as well as an analysis of the results of the investigation, and a personal evaluation of the individual study efforts engaged in as these were assessed in terms of the purposes agreed upon.

Some Final Comments

The major theme around which the individualized instruction emphasis of the Inter-University Project was structured was that in order to provide situations in which learning can be expected to be effective, there must inevitably be reflections of enterprise by the learner himself. In other words, learning is a process of individual effort and individual adjustment. So, in any event, learning experiences must have individual colorations.

However, this is not to say that learning can only take place as a single student is directed by a single instructor. It rather mandates an individual emphasis in all instructional processes whether they be large group, small group, or actual individual study operations. Great stimulation can result from participation in any sort of organized endeavor, but the determining factor as to its educational value is how well it contributes to an on-going process of analysis and consequent reconstruction. Thus the need is to search constantly for instructional procedures which will not only stimulate individual interest but will also cause a continuous stream of investigation and follow through on concerns that are encountered.

Even a cursory review of programs of individualized instruction through literature on past endeavors or analyses of those presently in operation indicates that little has been or is being done to emphasize more directly the instructional needs of individual students. Honor programs, tutorial programs, as well as independent study programs of various sources are almost universally confined to selected individuals in a few institutions. Apparently, what is called for is a broad-scale effort of immense magnitude in order to test out the validity of many of the assumptions about independent study activity and if these can be substantiated, attempt a pattern of adaption of the concepts to large populations of students.

Individualized Instruction in the Inter-University Program. The efforts to develop a total program of teacher participation around concepts of individualization of instructional procedures was an attempt in the direction of providing teacher education experience with an individualized element at every level of preparation. To the framers of this program, the idea was repugnant that a program of preparation could be built out of a series of unrelated and descrete elements. There is no conclusive evidence available which can support the rather universal conception of course-work components as being the basic elements necessary in a college program. The idea that passing through a series of course experiences will leave ever-expanding increments of functional knowledge must be suspected when the products of such organizations are assessed. Yet little is being done to break the lock-step of such patterns or to build innovating features into modern programs of teacher education.

The Inter-University project in teacher education is an attempt to break this lock-step in professional preparation. Its main feature was the attempt to build into the total college program of each student, some deliberately planned individualized orientation. This is a radical departure from the commonly accepted trend in teacher-preparation today in which professional emphasis at any level, except for an extremely minor and well-segregated phase of the program, is considered the equivalent of an evil force. More and more, the respectability and the status is tied into non-professional endeavors and the possibilities of introducing teacher preparation emphasis into any segment of the college program except for the "required" experiences themselves, is viewed with horror. Even the so-called "educationists" have become convinced of the efficaciousness of the traditional pattern and of the warrant in the current arrangement for the exclusion of any but the absolute minimum of professional endeavors.

In the Inter-University Project in Teacher Education, the opposite assumption was accepted as a starting point. That is that professionally-toned endeavors can provide a focus--for, and an incentive in terms of, the total program of educational endeavor in which a student is involved. To have some central and purposeful theme to work in relation to, does not pervert a program nor does it constrict its possibilities. Rather it expands the potential for every endeavor that is included. General studies--the so-called "liberalizing" component--can become more meaningful as they are focused through a lens of analysis that reflects them upon problems which the student can see, interpret and understand. Concentrated work in a specialty has meaning and implication for its actual use in an institutional situation by the student himself when viewed as a vehicle through which he may be helping others to learn throughout his professional life. And of course, the professional component is broadened by becoming not just a series of experiences that one must be subjected to in order to become licensed to teach, but rather as elements tied to and integrated with all other aspects of preparation, the total of which is the insurance of competency in the activities of the profession.

Thus, in this project, students entering the program as Freshmen were provided experience in working with individual students in secondary schools and in instructional situations. This served as a focusing element for many of the concepts with which other course experiences were dealing in the more abstract fashion. During the Sophomore year another element was included with a similar intent. Here project enrollees were put in school programs to work with small group enterprises. In the Junior Year the emphasis was upon an understanding of school and community relationships and all of the cultural features that impinge upon school endeavors, particularly the learning processes in which students must engage. The focus was provided through work in community endeavors and observations in school-community activities. Finally, the Senior year program was organized around Independent Study in Educational Foundations with the student-teaching enterprise providing the laboratory and the instructional processes of the teaching experience itself providing the crucible out of which problems for study were selected.

The Independent Study Program. A few further statements need be made in relation to the independent study concept and the program in Foundations in which study was arranged as a part of the Four University Project.

As was indicated earlier, an educational experience to be of value must have some "independent" connotations out of which meaning for the individual can come. Thus all education is of an independent nature in some very theoretical and perhaps ethereal sense. What needs continued and deliberate emphasis, it would seem, is to attempt to make this independent element more conscious and more necessary in the endeavors in which students engage. This was the basis upon which independent study activities were organized in the Foundations of Education area.

However, another important theoretical construct undergirded these efforts as well. This is the idea that Foundations concepts are not embodied in ethereal constructs to become knowledge and then infiltrate practice in that order and in theory oriented situations only. The point-of-view taken in this program was that knowledge of history, sociology, philosophy, psychology, anthropology and other so-called "Foundations" areas is of consequence only as it illuminates educational practice and the living experiences of the teacher. Further, its value to the prospective teacher is based upon the potential such knowledge holds for contributing to the solutions of problems with which a teacher is confronted in actual institutional and other life situations. Thus the knowledge which is "necessary" from these areas is not determinable through some confined analysis of the various disciplines by authorities in the fields.

It rather comes from the study of pertinent problems which teachers face, those they should be facing, and the examination of these for roots which extend into the areas of knowledge. From such a tracing it is possible to find information which is extremely useful in viewing the circumstances and in solving the problems encountered in the course of educational activity.

These remarks indicate a process, as well as a product, that is important in structuring experiences for prospective teachers. The process is that of viewing actual on-going instructional situations, being sensitive to problems inherent in them, finding ways to confront the problems and applying appropriate concepts in an effective manner in the solution of the problems. This is the process of independent study.

The product of such process is knowledge. It is a set of concepts and understandings that functions in experience and can be called upon to illuminate further experiences in a multitude of ways. Pertaining to Foundations, this is the knowledge of historical backgrounds, of idiological (philosophical) positions, of cultural (sociological and anthropological) conditions, and of behavioral (psychological) characteristics and potential. This is the kind of knowledge that is necessary for the potential professional worker--the kind that can be expected to serve as a true foundation to his efforts.

The independent study program was an attempt to build upon these concepts. It was an effort to infiltrate a teacher education experience with truly independent endeavors. Independent in that they were initiated by the individual within the context of his practical experience and in response to actual problems which were being encountered. They were truly study endeavors in that they were structured by the individual in terms of his needs and directed toward ends which he had established and which he felt were important enough to serve. Faculty members, from both the school and the university, served as consultants in the development of these study tasks and as guides in the processes through which the individual was going.

The product--the knowledge that was gained--was a result of this kind of emphasis. It was the "true" product of an activity, rather than an encompassed set of a priori ideas and bodies of information to be inculcated into relatively passive receipients. What was learned was that which was experienced in a very individually structured and independently charged atmosphere. The results in terms of growth on the part of the individuals involved, was quite gratifying and of broad scope in every instance.

Some Broader Reflections

These experiences can be generalized in terms of implications of a rather broad character. To be sure there is always danger in such extension, yet there is no way to incorporate innovations into wider application other than to generalize from constricted experimentation and find ways of applying in more encompassing fashion.

The activities which have been fostered within this teacher education project point up the need to explore more generally several aspects of the typical approach to college programs.

1. The need for focus in all educational activity.

It is apparant from a tremendous variety of studies on learning and is evidenced from results of this project, that learning can result most effectively from activity that has focus, that has orientation and organization, and that has meaning in terms of the learners own experience. This would suggest that productivity would be greatly enhanced by structuring experiences in a way that would provide focusing elements in college programs. In a vast majority of instances, an effective focusing potential is available in the form of a professional objective, yet this is an element that is frowned upon as an emphasis in most undergraduate programs. Exclusive emphasis upon professional preparation so much exemplified in "trade" or "vocational" schools is not what is being suggested. The reaction to the narrow and constricting results of this kind of focus could be well justified. What is being suggested is that a professional element be introduced as a core feature around which a broad and varied program could be structured. With the centralizing feature, the breadth and scope would be organized rather than diffused as is the common result of separate, discrete and unfocused course elements.

2. The need for individualized study efforts at all levels and for the varied population of students.

To say, as is common, that individualized processes are applicable and valuable only at an upper level of program offerings and only for selected groups of talented students is to misconstrue the potential inherent in such a program and to misunderstand its purpose. Individualized institutional processes are means of promoting learning, and there is no relationship between possible productivity of such programs and the character of the individual involved. Productivity of these processes is a function of how they are applied and how well they stimulate and direct the course of individual experience. If, as learning theorists contend, the productivity of educational experiences depend upon the extent of individual involvement in them, then there is a need for providing a maximum of individualization in every aspect of educational activity, and that organized and carefully structured programs for this purpose can be designed is hardly questionable. It is only necessary to apply to the problem of doing so the tremendous creative potential that is available on college campuses today. Perhaps the greatest need is to eliminate the stultifying conceptions of restriction that are common in most institutions, and replace them with ideas about individualization--ideas that can be applied in some fashion under most of the circumstances present in institutions today.

What is needed is some radical innovations in organization of activity in education. These innovations would, of necessity need to emanate from several basic assumptions. Unfortunately, these can be expressed best in their negative form, but efforts will be made to make positive recommendations out of them.

1. Learning takes place only under the direction of an instructor.

The most stultifying position influencing educational design is that learning is a function of direct and organized contact with an instructor. This has usually been applied to educational design by organizing instructional patterns so that a maximum of the experience is encompassed by instructor-dominated activity. Learning in this setting has become a process of acceptance and recitation of words that can be regurgitated through some form of instrument designed for this purpose.

That learning takes place under many other sorts of circumstances everyone is aware. And that many other sorts provide much more constructive experiences is also apparent. But these concepts are not universally adopted as bases for instructional design in college and universities. Consequently, patterns of unproductive endeavor predominate.

Individualized instructional procedures hold promise for enriching learning experiences through capitalization upon the inclinations of the student himself. They also are structured in terms of learner self-direction through self-motivation. That it is more difficult to organize activities with individualized emphasis is likely uncontestable.

However, the potential for broader and deeper conceptualization of ideas considered important in an area of specialty makes it imperative that designs be developed to include such emphases.

To point this up in its negative aspect it is only necessary to view the extreme unproductivity of regularly patterned programs of endeavor in most institutions. Much carefully controlled research has been applied to traditional procedures and these universally point out the loss of 60-80 per cent of what ostensibly has been learned in an extremely short period after the institutional experience. This is a loss that cannot be afforded at such a trying period of history and one that calls for innovations which hold promise for a more adequate and appropriate approach.

2. Learning takes place best when subject matter is organized and presented in an order prescribed by instructor.

This is a proposition that has formed the basis for practically all educational endeavor of recent vintage. It suggests that learning is a process of acquiring the facts and information determined significant by an authority in an area. Further, it suggests that education is a process of transmitting this already decided upon and already organized body of information. It also implies that the products of such processes will result in an individual's more effective functioning as a person, as a specialist and/or a professional worker.

There is considerable question about all of these suppositions, the evidence about which needs no extensive treatment here. This report has been a documentation of a process designed upon a basis of opposite propositions the outcomes of which have been of an extremely constructive nature.

Apparently, learning is a function which relates, not to an a priori structuring of an experience, but rather to the effect that the elements of the experience have upon the individual. Thus, to be educationally productive, an instructional activity must involve the individual--not just function around him. It must initiate an inclination to do something and to follow through a process of analysis to arrive at conclusions which satisfy, for the learner, the elements of the circumstance which started the process.

Here, again, an individualization of instruction must be encouraged in order to insure a personal involvement in the endeavor. This individualization must include an opportunity to find relationships which have personal implications, within the subject-matter being emphasized. There must also be the opportunity to encounter problem possibilities and to follow these through to their solution. This is the process by which learning is best encouraged and from which knowledge, in its truest sense, can be expected.

3. Learning takes place most "efficiently" when students are arranged in large groups.

One of the most insidious propositions undergirding institutional endeavor is that the efficiency of an endeavor can be increased in proportion to its size. This has led to an ever-increasing class size under the assumption that the "quantity" of education can be expanded as a function of the numbers involved. It is concluded that if a person can lecture effectively he can do so to a group of any size with the same result. This is probably true though there is some doubt about the real efficiency of the pattern in terms of actual learning that is being stimulated.

When what is actually learned is used as a criterion, there is some doubt as to the efficiency of gathering larger and larger groups together to be lectured to. If it is learning that is desired, then efficiency can be calculated only on the basis of the individual stimulation that the procedure provides, and this is not a direct function of increasing size. In fact it may be just the reverse. The larger the size of the group involved the greater the challenge for providing stimulation to the learners involved. Thus some reanalysis of the concept is called for and perhaps some redirection is needed in the pattern of instructional programs in many schools.

Perhaps there are ways to make large group activities extremely stimulating and productive as instructional devices. This, however, would likely depend upon other processes being introduced as complimentary: that is the development of individualized instructional emphasis with large group activities providing information--giving opportunities which students could use in seeking the facts and ideas that they consider necessary for pursuing the problems with which they are involved.

In other words, the structure of instructional efforts in most institutions may need inverting. The formal lecture, recitation, examination process should be subordinated to an individualized instructional scheme in which problems and concerns of students would direct the course of study. This would call for very little in the way of additional staff and resources, rather a reorganization of them. All sorts of procedures and devices are available for individualization and most of them require little additional staff involvement in terms of total commitment. They require rather readjustment of program, program purposes, and a rearrangement of staff and resource allocation. As a very crude example, a staff member could handle a reasonable number of students in a program with half the directed instructional time involved and the remaining time in independent study direction, all with no greater investment of time on his part.

All that is needed is a firm conviction that there are ways of helping individuals learn other than having them attend formal classes and read required material.

4. Learning is best assessed by using instruments to check acquisition.

A final proposition which appears to undergird much instructional activity is that learning can be assessed by checking what has been acquired in the form of facts, and ideas. That facts, ideas and information is important and must be involved in learning is not in question. What is being contested is that these are the all and essence of learning or that they are the primary reflections of the evidence that learning has taken place.

Learning, in terms of the use of the concept in this report, is a "reconstruction" and "reorganization" process. This takes place as an individual confronts the elements in a situation which have significance for him, and tries to do something about those aspects which appear incongruent within the total pattern. Again, it must be emphasized that facts and ideas continuously play an important part in this process, but they are neither the necessary starting points nor the final conclusion. They are essentially the instruments with which the individual attempts to meet, to make sense of and to move on from, in the course of his experience.

Thus, testing for facts, ideas and information gives an indication not of learning but of the accouterments through which learning might or might not be embellished.

Evaluating the product of learning must be an experimental process. Emphasis must be upon what the individual can do and the processes upon which he can call in doing it. High points of significance in this sort of evaluation is how the individual interpreted the situation, how he was aware of incongruities in it, how he applied concepts and ideas to these in attempting to adjust them, and how he managed to surmount the difficulties involved to continue onward in an effective course of activity. These are the elements that typify an individual who is learning and they are the increments that need to be assessed.

The most distructive factor in the use of these instruments designed to check the "amount" of information acquired or the facts and ideas is what they do to the instructional process itself. They put the premium upon facts and information as the central feature of learning. They cause the learning experience to be structured as a transmitting-acquisition medium. And they convince all concerned that this is education; an endeavor to be encouraged and its end to be prized.

The individualized instructional processes described in this report are of another character altogether and the evaluation techniques are correspondingly different.

Attempts were made throughout to assess the elements considered important in learning rather than the accouterments that should be attached thereto. Attempts were made to assess what students could do and what functions they could perform. That these characteristics must become more uniformly applied to evaluational processes is of serious concern for they are necessary to assess the real outcomes of learning and they condition inevitably the kind of instructional process which precedes them.

A Concluding Statement

The Inter-University Project has demonstrated that experiences in teacher preparation can be organized in an extremely effective fashion from a basis other than a typical course-work pattern and a general-professional component separation. In fact, the products of this program have exhibited a level of competency quite unusual for products of teacher education programs.

This program has been a demonstration of an attempt to individualize instruction at all levels and has shown that through such a process learning can be stimulated for those involved. It has been an exhibition of an independent study emphasis from which students can profit by following the course of analysis and study which they have had an integral part in structuring.

From the work embraced in these activities it has been suggested that broader and more inclusive efforts might be explored for there are possibilities for the application of individualized instructional experiences in a more general fashion than here demonstrated with possibilities for a level of efficiency and economy in learning not conceivable in traditional patterns so common in institutions today.

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INTER-UNIVERSITY PROJECT ONE

PUBLICATION SERIES

INDIVIDUALIZED INSTRUCTION IN TEACHER EDUCATION

Part II

A Resource Unit

Prepared by:
Charles R. Fall
Robert S. Harnack
James E. Hicken

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and Syracuse University is supported
by the Ford Foundation.

DIRECTOR

Robert S. Harnack
Professor of Education

PROJECT ONE STAFF

H. Warren Button
Associate Professor of Education

Charles R. Fall
Professor of Education

Adelle H. Land
Professor of Education

Charles K. Wright
Instructor in Education

ADVISORY COMMITTEE

Milton C. Albrecht
Dean, College of Arts and Sciences

Adelle H. Land
Professor of Education

Robert H. Rossberg
Professor of Education

Robert S. Fisk
Dean, School of Education

Single copies of this publication are available from:

State University of New York at Buffalo
School of Education - 220A Foster Hall
3435 Main Street
Buffalo, New York 14214

FOREWORD

The professional teacher today, whether he is in a university or in the elementary or secondary schools, knows the importance of pre-planning and how such planning should be directly related to his understanding of the needs, interests, and abilities of his students as well as the reservoir of classroom suggestions at his disposal. The following resource unit is an attempt to help college instructors in pre-service teacher education pre-plan about the topic "Individualized Instruction." During the past five years the Inter-University Project in teacher education at State University of New York at Buffalo has emphasized individualization of instruction in every aspect of its planning and program. The culmination of this activity lead to the development of a specific report entitled Individualized Instruction In Teacher Education, Part I.

This resource unit is Part II of this sequence and was developed by the authors in order to help other college instructors get over a very difficult hurdle: teaching an important area or topic about which ideas are normally unavailable for purposes of pre-planning. If one were to follow the normal outline of a resource unit, a section called "The Significance of the Topic" would be included. No such section exists in Part II. However, the initial bulletin listed above should be considered as "the significance of the topic" for this resource unit. Obviously, we would encourage any one who used this resource unit to first read the initial publication.

For those who know nothing about a resource unit, it is important that they recognize that this bulletin is for the instructor only. They should be aware that a resource unit is a volume, collection, or reservoir of suggested learning outcomes, subject-matter content items, introductory, developmental, and culminating activities, all types of instructional materials, and evaluating devices about a specific topic which an instructor uses to pre-plan a teaching unit. The individual instructor should choose from the resource unit those objectives, activities, and the like which seem appropriate for the abilities and interests of his students.

Finally, it should be pointed out that this unit is far from complete. Instructors, who plan a teaching unit, must constantly up-date the suggestions and add to the collections of possibilities. Nevertheless, even though incomplete, we hope this is a sincere attempt to fill a void in teacher education.

May, 1966

Robert S. Harnack
Director, Project I

HOW TO USE THIS RESOURCE UNIT TO PRE-PLAN A TEACHING UNIT

-- Read carefully the significance of the topic (Bulletin: Individualized Instruction in Teacher Education, Part I), the desired outcomes which are given at the beginning of this resource unit (Part II), and the suggested approaches or activities.

-- Compile a selected list of the desirable outcomes suitable to your situation and a list of the main items in the subject matter content outline to be emphasized in the study.

-- Determine the approximate amount of time (4 weeks, 6 weeks, etc.) which can be devoted to this unit of instruction.

-- Study the possible activities that might be used and select those which best meet the needs and interests of the student in your class.

-- Itemize the instructional materials needed for these activities and make the necessary arrangements with persons and agencies involved.

-- Determine, as carefully as possible, that the activity and materials chosen will aid the pre-service teacher education students in obtaining the desirable outcomes of the unit in terms of fundamental skills, understandings, and attitudes.

-- Identify possible evaluation devices (observation by critic teachers, paper-pencil tests, group discussions, inventories, anecdotal records, conferences, etc.) which might be used to determine whether or not the objectives of the unit are being obtained. When the above pre-planning is completed, the instructor can use this pre-planning as a frame of reference to aid his own thinking as he plans with and guides students.

STUDENT-INSTRUCTOR PLANNING

Points to consider:

-- A thorough understanding of the range and kinds of resources in this resource unit is necessary to give an instructor security in any student-instructor planning activities.

-- Not all the activities and references suggested by students during planning will be found in this resource unit. But, in many instances, these suggestions will be similar.

-- The amount of planning done in the classroom should be determined by the ability of the students to plan with the instructor. For example, students who do not know how to plan must be lead into this program very slowly. Those who have had practice can plan many more activities.

-- Instructors should be prepared to suggest series of at least five to ten specific activities, references, and the like, to introduce the unit. Students who do not know how to plan will be especially hesitant in making suggestions of things that might be done.

-- Final decisions, whether by the instructor or students, to carry out a certain project, activity, and the like, should be guided by the planned instructional objectives of the topic or unit.

-- Careful student-instructor planning requires some form of resource unit for the instructor, but a resource unit in the hands of an instructor does not mean that the instructor has to plan with students in order to use the resource unit.

I. DESIRED OUTCOMES

1. To become aware that each child should feel he is contributing to society by learning.
2. To learn to convey to the pupil that he has important goals to reach.
3. To learn to help the pupil use educational resources in the school and outside.
4. To learn that the teacher should promote freedom of thought in her pupils.
5. To learn to help the pupil realize his own self worth.
6. To become proficient in helping the pupil aim for personal goals, rather than being controlled by his peer group.
7. To learn to help the pupil realize the importance of question and choice, and to guide in mature decision making.
8. To learn to help the pupil develop a sense of responsibility and use it wisely.
9. To learn to help the pupil understand his relationship to society.
10. To learn to design and improve the school's curriculum in order to make it more compatable with the individual pupil.
11. To learn more about the integration of creative and intellectual capacities.
12. To learn to develop the pupil's interest in permanent learning.
13. To become more aware of varied teaching techniques needed for teaching pupils of differing aptitudes, interests, etc.
14. To develop skills in interpreting and preparing tests for pupils.
15. To learn to help pupils select individual learning goals and work towards them.
16. To learn to help pupils evaluate their own progress and efforts in terms of their goals.
17. To understand the concepts of culture and social class in order to deal with pupils of various backgrounds in the most meaningful and successful manner.
18. To learn to develop ways of adjusting activity to the various needs of individuals.

19. To become aware of the unique needs and limitations of the pupil so as to present him with experiences which will satisfy these needs.

20. To learn the characteristic emotional needs of the pupil in relation to his developmental process.

21. To learn that each pupil's emotional development is unique and dependent upon the sum total of all his experiences.

22. To develop critical thinking among pupils.

23. To develop the ability to establish a sound relationship between the teacher and the learner.

24. To learn to relate subject matter to the problems of society in which pupils live.

25. To understand the influences of the pre-natal and infancy periods of the child on his present behavior.

26. To understand characteristic behavior of the pupil.

27. To learn to help individuals see and interpret problems out of which learning experiences can be structured.

28. To understand the characteristics of behavior during adolescence.

29. To have a wider knowledge of, and to define one's own thinking relative to, various teaching practices.

30. To learn to use all materials available to the teacher.

31. To learn to stimulate class discussions and participation.

32. To learn techniques for working with individuals in large and small group situations.

33. To learn the characteristics of individuals at various stages and to understand the relationship between characteristics and behavior in learning situations.

34. To learn to make a total assessment of individual potentiality and to use this in structuring effective learning experiences.

35. To learn how socio-economic factors influence individual behavior.

36. To learn to evaluate individual learning experiences.

37. To learn to use and interpret information gained about a pupil in guiding individual learning experiences.

38. To understand the nature of learning and to become aware of various learning theories.

39. To become aware of reflections of the growth process--the needs, concerns, and interests of adolescents--which result in behavioral manifestations.

40. To learn to identify pupils with serious problems which require special help.

41. To understand the effect of environment on pupils.

42. To understand the powerful effect the "peer group" has on the individual.

43. To develop a knowledge of socio-economic factors as they effect individual behavior.

44. To learn about some of the newer programs concerned with the teaching of individuals.

45. To develop an understanding of the factors that make for better individualized instruction.

46. To understand the needs and desires of a minority group and how they affect its members.

47. To be able to develop a pattern of study and plan of activities which involve all members.

48. To learn to help individuals assess their experiential backgrounds.

49. To learn that the teacher should be a motivator, but he should allow for a certain amount of freedom for discovery and exploration.

50. To learn that the teacher must help the pupil learn how to organize according to his own individual system of thought.

51. To learn that a teacher must be aware of outside factors which can cause an intelligent pupil to appear disinterested and can effect the quality of his work.

52. To learn that the teacher must plan curricula with the needs of youth in mind, in order to satisfy the urgent demands of today's adolescent.

53. To learn that the teacher must be able to recognize the development of interest, intellegence, special aptitudes, personality characteristics, and achievements in each pupil.

54. To learn that it is the teacher's responsibility to see that all pupils (including those who cannot express themselves or who do not have the capacity to do as well as the others) have a fair chance in the class.

55. To gain a better understanding of the learning process.

56. To understand that young people are sometimes afraid to be individuals and will, therefore, require extra support from the teacher.

57. To realize that every human being has a need to be independent and that he must be able to perceive himself as a separate entity when necessary.

58. To realize that man must relate himself meaningfully to those around him.

59. To gain an understanding of the individual in a complex mass society that seems to be breeding conformity and anxiety.

60. To gain an understanding of the individual in a psychological context. To understand the coming of personality in a person, and the ways in which he develops his own particular style of life.

61. To accept the individual who can't adjust to the things around him.

62. To understand the individual's problems within a large overall view.

63. To understand those problems of the handicapped child which are so often uncontrollable.

64. To develop a knowledge of all aspects of readiness.

65. To develop a knowledge of the influence of heredity and environment on the individual.

66. To learn and understand motivations behind class behavior patterns.

67. To learn more about standardized tests as tools to aid teachers in understanding pupils.

68. To learn techniques of child study, their uses, limitations, and recognized advantages.

69. To learn to increase the effectiveness of teaching by restating the goals of instruction as they are seen in the teaching-learning situation.

70. To develop the ability to interpret the goals of education in order that the pupil might orient himself to the subject matter.

71. To become aware of the ever-changing needs of society and plan curricula accordingly.

72. To understand the significance of the adolescent's problems in his own mind.

73. To understand that curriculum goals should be unlimited and flexible.

74. To establish a philosophical structure based on subject matter which helps pupils make sense out of the lives they lead.

75. To learn to recognize the level of readiness of a pupil so that a curriculum may be adjusted to the pupil's way of viewing things.

76. To learn to select diverse materials that will challenge the superior pupil but not frustrate the less intelligent pupil.

77. To learn to help individuals use, in their learning activity, the vast educational resources available.

78. To learn to help pupils assess their efforts and evaluate the results of their learning activity.

79. To learn to evaluate pupil progress and growth and to report progress to pupil and parents.

80. To become familiar with reflections of the growth process (needs, interests, concerns, etc.) which result in behavioral manifestations.

81. To become familiar with disciplinary problems and how to cope with them.

82. To develop an understanding of the home and family and how these relate to the school life of the pupil.

83. To know the characteristic way in which the child views and interprets the world.

84. To know how to present subject matter in terms of the child's characteristic view of the world.

85. To learn to foster self-motivation by realizing the importance of discovery as an aid to teaching.

86. To know the role of experience in learning.

87. To learn the qualities and conditions for mature cognition. (Understanding and comprehension.)

88. To learn to foster self-expression.

89. To learn how to guide development in cognition--ways to facilitate understanding.

90. To learn the necessary conditions for learning.

91. To learn the conditions conducive to problem solving.

II. CONTENT OUTLINE ITEMS

1. The maintenance of our best traditions demands educating everyone to his highest possible level of attainment. Consequently, administrators and teachers must do their utmost to provide suitable group and individualized learning opportunities.

2. The cultivation of a diverse array of human capability is essential for a self-renewing society.

3. The curriculum must be organized through principles, concepts, and theories which make the individual increasingly self-sufficient.

4. Gross differences from individual to individual and within any given individual regarding readiness to perform actual tasks suggest that extreme care must be exercised in setting group standards of performance.

5. The curriculum can only provide for some of the individual's needs. The individual must do much on his own. The curriculum must be diverse, but not infinite.

6. A curriculum organized around the individual is primarily psychological while a curriculum organized around subject matter is primarily logical.

7. Recent research into inquiry and creativity suggests that a narrow concept of school expectancy does not foster divergent or creative aspects of thinking.

8. Children entering a grade or class will be at different levels of development and will continue to develop at different rates. They cannot be expected to achieve similar levels of development in skills and understandings at the end of any given amount of time.

9. Although each learner's characteristics and needs are different, minimum essentials are often defined in terms of subject matter rather than students.

10. The optimum progress of each pupil will be different from that of any other pupil, but his progress is too often compared with some assumed average or ideal called a ''standard'' and he is marked or graded according to this comparison.

11. Although individuals are known to have widely varying needs, interests, and abilities, schools too often compel pupils to engage in activities that may be appropriate to only a limited number of these needs, interests, and abilities.

12. Curriculum is often planned around ground-to-be-covered schedules and other prescriptive measures.

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13. There is a failure in many schools to utilize the findings of educational research and experimentation in curriculum planning.

14. Curriculum plans are often made on the basis of group rather than individual expectations.

15. There is a lack of relationship between individual learning experiences in and out of school.

16. Pupil-teacher planning, which tends to promote more effective individualization of instruction, is often lacking.

17. There is often a reliance on ineffective procedures such as recitation and meaningless drill.

18. Instructional resources are not used to their fullest potential in providing for individualization of instruction.

19. Standardized tests of mental ability, standardized tests of achievement, tests of creative and specialized abilities and aptitudes must be examined.

20. Physical status of individuals may be examined by careful analysis of health and physical development records, direct observation and interviews, parent reports, physical education teacher reports, leisure activity, etc.

21. Direct observations and personal conferences, parent conference, sociometric devices, pupil-prepared records, anecdotal records, tests and inventories--interest inventories, etc. Projective methods of personality study.

22. PUPIL-TEACHER PLANNING -- establishing and planning for individual interests, needs, abilities.

23. PROGRAMMED LEARNING -- means of individualizing instruction.

24. THE SELF-CONTAINED CLASSROOM -- the problems involved and advantages in this structure, relationship to individualization of instruction.

25. The teacher participates in curriculum development by planning cooperatively with other teachers--sharing in curriculum revision--showing flexibility in modifying his plans to fit those of the entire school.

26. INDEPENDENT STUDY -- relationship to individual differences and abilities, creativity and inquiry--study that is important and useful to the student--an individual's need for responsibility.

27. UNITS -- definition--value as fusion of child's interest and educational aims.

28. ABILITY GROUPING -- heterogeneous vs. homogeneous grouping--advantages and difficulties of each in terms of individualizing instruction.

29. FLEXIBLE SCHEDULING -- rationale--as a technique for individualizing instruction.

30. RESOURCE UNITS -- definition--how developed--characteristics of.

31. TEACHER-PUPIL PLANNING -- values of relationship to cooperative group planning, student interests--materials of instructor--individual differences.

32. TEAM TEACHING -- rationale--relationship to indivualization of instruction--flexibility of grouping and timing--individual needs.

33. THE NON-GRADED SCHOOL -- relationship to individualization of instruction, i.e., the continuous growth rationale as opposed to the grade standard theory.

34. CHILDREN OF LOW SOCIOECONOMIC LEVEL -- cultural background usually dissimilar in terms of typical curriculum--culturally handicapped.

35. CHILDREN OF FOREIGN PARENTS -- language handicap--limited experience.

36. CHILDREN IN SPARSELY SETTLED AREAS -- limited opportunities--often limited educational facilities.

37. CHILDREN OF MIGRATORY WORKERS -- low social-economic level--special problem.

38. ORGANIZING SPACE -- a move away from box type classroom arrangement to a more flexible school plan--need fluid or malleable space arrangement to provide for curricular flexibility.

39. SPACE NEEDS -- teacher work space--instructional material space--adjustable or flexible group space--independent learning space--special subject space.

40. THE SCHOOL WITHIN A SCHOOL -- relationship to individualization of instruction, i.e., "the little red school house" concept.

41. EDUCATIONAL TELEVISION -- relationship to class size, levels of interest, student responsibility or learning, video tapes.

42. THE INSTRUCTIONAL MATERIAL CENTER--adjunct to school curriculum--microfilms, charts, recordings, film strips, tapes, film and other instructional devices--center for curriculum planning.

43. THE SCHOOL LIBRARY -- adjunct to curriculum--a catalyst in terms of enjoyment, appreciation, and understanding.

44. THE TEACHER'S ROLE -- mediator of learning--creator of desirable behavior--parent substitute--academic judge--confidant--transmitter of knowledge and values.

45. QUALITIES OF THE TEACHER -- knowledge of subject matter--sense of humor--leadership--emotional stability--health--understanding--objectivity--resourcefulness--creativity.

46. HOMEROOMS -- teacher and pupil rapport, guidance activities--informal atmosphere, educational value.

47. THE TEACHER AIDS STUDENTS IN UNDERSTANDING AND APPRECIATING OUR CULTURAL HERITAGE -- organization for democratic living--helping pupils know and apply the democratic principles of our heritage.

48. THE TEACHER COUNSELS AND GUIDES PUPILS -- uses sound psychological principles concerning growth and development--maintains objectivity when dealing with abnormal behavior--is sympathetic and sensitive to student's needs-- makes curricular adjustments--secures sufficient rapport with students-- maintains effective relationship with parents--collects sound counseling data--uses suitable counseling procedures--maintains appropriate relations with guidance and other specialists.

49. ATMOSPHERE CONDUCIVE TO LEARNING -- balance between freedom and security--pupils assume leadership and responsibility--expression of independent critical thought.

50. USE OF EFFECTIVE AND CONTINUING MOTIVATION -- use of interests, and abilities of pupils--use of experiences of pupils--draw upon life situations interests inherent in subject matter--provision for varied learning experiences, teaching procedures, and cooperative planning with pupils.

51. THE TEACHER'S ROLE -- selection of instructional materials, devices, and techniques related to subject matter and to the characteristics of learners.

52. THE TEACHER'S ROLE -- selection of evaluative devices which relate to originally stated objectives.

53. THE TEACHER'S ROLE -- selection of objectives and provision for pupil-teacher planning.

54. THE TEACHER'S ROLE -- selection of subject matter which is related to objectives.

55. THE TEACHER'S ROLE -- selection of large group, small group, and individual activities which are related to objectives and subject matter.

56. GUIDING CLASS GROUPS -- pupils define individual needs and interests--pupils define objectives--pupils appraise objectives.

57. LESSON PLANS -- methods of achieving educational objectives--objectives, subject matter, activities, resources, evaluation.

58. INTERESTS, NEEDS, AND TASKS -- interests as a source of curriculum content--pupil interest as the basis of curriculum planning.

59. INTERESTS, NEEDS, AND TASKS -- interests as ends of education--an ongoing process of interest fulfillment.

60. INTERESTS, NEEDS, AND TASKS -- needs as developmental tasks.

61. INTERESTS, NEEDS, AND TASKS -- high school pupils often fail to see the meaning or values of the secondary curriculum.

62. INTERESTS, NEEDS, AND TASKS -- the typical high school curriculum based on the interests of adults rather than those of adolescents.

63. INTERESTS, NEEDS, AND TASKS -- interests do not always coincide with the high school curriculum.

64. INTERESTS, NEEDS, AND TASKS -- Why, as the child grows and develops, does his enthusiasm for school decline?

65. INTERESTS, NEEDS, AND TASKS -- Doane's study on needs of pupils.

66. INTERESTS, NEEDS, AND TASKS -- needs imply something more substantial than mere interests.

67. EXCEPTIONAL CHILDREN -- same educational objectives--special services--integrated with other children as much as possible--increase in guidance service--functional curriculum in terms of prognosis--close home and school cooperation.

68. THE ATYPICAL CHILD -- early identification of atypical children is essential.

69. THE ATYPICAL CHILD -- emotionally disturbed--characteristics--ways in dealing with--outside help.

70. THE ATYPICAL CHILD -- slow learner--definition--provisions for.

71. THE ATYPICAL CHILD -- mentally retarded--educable--trainable--characteristics--definition--provisions for.

72. THE ATYPICAL CHILD -- mentally gifted--definition--provisions for.

73. THE ATYPICAL CHILD -- physically disabled--definition.

74. THE ATYPICAL CHILD -- socialization of, unique experiences of--comes to know his uniqueness through the behavior of others toward him--the stigma of being different--role and self image--public's attitude--family--peer group--school.

75. THE ATYPICAL CHILD -- educational retardation--definition--ways in dealing with.

76. LEARNING PROCESS -- motivation--interest in the work--interest in improvement, significance, problem-attitude, attentiveness.

77. LEARNING PROCESS -- physiological--Thorndike's connectionism--the basis of learning is an association between sense impressions and impulses to action.

78. LEARNING PROCESS--physiological--Thorndike's three primary laws of learning: law of readiness, law of exercise, law of effect.

79. LEARNING PROCESS--physiological--Thorndike's subordinate laws of learning: multiple response, set or attitude, prepotency of elements, response by an analogy, associative shifting.

80. LEARNING PROCESS--revision in the law of effect and exercise (1929) practice brings improvement only because it permits other factors to be effective; practice itself does nothing.

81. STIMULUS--response learning rationale--application to teaching.

82. LEARNING PROCESS--connections become strengthened by being rewarded, not by just occuring.

83. LEARNING PROCESS--truncated law of effect--reward and punishment are not equal and opposite, reward appears much more powerful than punishment.

84. LEARNING PROCESS--belongingness--the after-effects are more effective when they belong and when they are relevent. Belongingness (reward or punishment) depends upon appropriateness and logical relationship to the activities rewarded or punished.

85. LEARNING PROCESS--spread of effect--influence of rewarding acts not only on the connections to which they belong, but on adjacent connections--the closer the connection, the stronger the response.

86. LEARNING PROCESS--capacity--capacity depends upon the number of bonds and their availability. The differences between bright and dull are quantative rather and qualitative. (Thorndike).

87. LEARNING PROCESS--practice of connections must be rewarded to be effective. Practice is important because it permits rewards to act upon connections. (Thorndike).

88. LEARNING PROCESS--motivation--reward acts directly on neighboring connections to strengthen them: punishment has no corresponding affect. (Thorndike).

89. LEARNING PROCESS--understanding--the role of understanding is minimized because it grows out of earlier habits. Best way to understand is to build a body or habit--a matter of transfer. (Thorndike).

90. LEARNING PROCESS--forgetting--some decay with no practice implied. (Thorndike).

91. LEARNING PROCESS--conditioned reflex--stimuli lead to reflex responses--second stimulus precedes or accompanies the uncondition stimulus and comes to elicit the response. Such a stimulus is called the conditioned stimulus the response is called the conditioned REFLEX.

92. LEARNING PROCESS -- reinforcement--the process by which a conditioned response is strengthened.

93. LEARNING PROCESS -- extinction--the tendency for a conditioned response to weaken or disappear completely due to repeated non-reinforcement.

94. LEARNING PROCESS -- generalization--the process whereby the novel stimuli produce a response learned in relation to another stimulus.

95. LEARNING PROCESS -- discrimination--if two similar stimuli are distinguishable the organism can be taught to respond to one and not the other.

96. LEARNING PROCESS -- contiguity of cue and response--law of association.

97. LEARNING PROCESS -- Guthries law of learning--a combination of stimuli which has accompanied a movement will on its recurrence tend to be followed by that movement.

98. LEARNING PROCESS -- repetition--a skill is not one act but many--depends upon a number of movements made under a number of circumstances. To learn all movements of a complicated skill calls for practice.

99. LEARNING PROCESS -- associative inhibition, forgetting, and the breaking of habits--extinction always occurs as an associative inhibition through the learning of an incompatible response. Forgetting is explained the same way.

100. LEARNING PROCESS -- motives--the motive is important only for what it causes the organism to do. Motives function to promote maintenance stimuli, keeping the organism active until a goal is reached.

101. LEARNING PROCESS -- reward--instead of reward strengthening behavior, it keeps it from disintregation. (Guthrie)

102. LEARNING PROCESS -- punishment--organisms seek relief from punishment, causing avoidance learning or escape learning. (Guthrie).

103. LEARNING PROCESS -- control of--(Guthrie) to encourage or discourage behavior, discover cues leading to the behavior, arrange the circumstances so that the behavior occurs or does not occur in the presence of those cues.

104. LEARNING PROCESS -- Skinner's operant conditioning--Skinner proposes that two classes of response be distinguished, a class of elicited and a class of emitted responses.

105. LEARNING PROCESS -- respondent and operant distinguished--respondent (elicited) operant (no known stimuli).

106. LEARNING PROCESS -- two types of conditioning--type S and type R.

107. LEARNING PROCESS -- positive and negative reinforcer.

108. LEARNING PROCESS -- secondary reinforcers.

109. PUNISHMENT -- consequences of, experiments with--two chief possiblities are that it weakens the habit or merely suppresses response.

110. PUNISHMENT -- when useful--used to hold a response at low strength--possible to take advantage of period of suppressed response--may be given in the presence of cues.

111. PROBLEMS OF LEARNING (Skinner) -- capacity--differences of capacity are not important since they do not provide any unit of behavior suitable for study.

112. PROBLEMS OF LEARNING (Skinner) -- practice--practice accepted under conditions of contiguity and response for type S conditioning.

113. PROBLEMS OF LEARNING (Skinner) -- motivation--a result of punishment, which reduces the rate of responding, without reducing the number or responses.

114. PROBLEMS OF LEARNING (Skinner) -- understanding--no insight--problem-solving is merely manipulating variables that may lead to the emission of the response.

115. PROBLEMS OF LEARNING (Skinner) -- transfer--the reinforcement for a response increases the probability of all responses containing identical elements.

116. PROBLEMS OF LEARNING (Skinner) -- forgetting--slow process of decay with time--distinction between extinction and forgetting.

117. LEARNING PROCESS -- the systematic position--behavior as molar rather than molecular--behavior is goal-directed--makes use of environmental support--principle of least effect--behavior is docile.

118. LEARNING PROCESS -- intervening variables--the complete act of behavior is initiated by environmental stimuli and physiological states.

119. LEARNING PROCESS -- intervening variables--Tolman's explanation of behavioral facts rests on intervening variables. These are inferred processes between the independent variables (Stimuli) and the dependent variables (responses).

120. LEARNING PROCESS -- expectancy vs. habit--with repeated experience of a sequence of events leading to a goal, the probability is discriminated that a given behavior will eventuate in the expected end result. Similar to habit formation.

121. LEARNING PROCESS -- expectancy--includes problematic situation, hypothesis or expectancies, a clear cognitive structure.

122. LEARNING PROCESS -- Confirmation vs. reinforcement (Tolman)-- Tolman protests against the law of effect and the principles of reinforcement. Motivation not related to learning, is related to performance, not to acquisition.

123. LEARNING PROCESS -- connections learned (Tolman)--catharsis-- equivalence beliefs--field expectancies--field cognition modes--drive discrimination--motor patterns.

124. PROBLEMS OF LEARNING (Tolman) -- capacity -- interested chiefly because of the possible gradation of learning tasks from those requiring least to those requiring most intelligence.

125. PROBLEMS OF LEARNING (Tolman) -- practice without belonging does not establish a connection.

126. PROBLEMS OF LEARNING (Tolman) -- understanding -- cognitive processes are the very essence of molar behavior in learning.

127. PROBLEMS OF LEARNING (Tolman) -- motivation--rewards and punishments tend to regulate performance rather than aquisition.

128. PROBLEMS OF LEARNING (Tolman) -- transfer--of only slight interest, because of high emphasis on animal experiments.

129. PROBLEMS OF LEARNING (Tolman) -- forgetting--accepts Freudian theory of ''repression.''

130. LEARNING PROCESS -- (Gesthalt theory)--emphasis on insight as an alternative to trial and error--chief opposition between association and Gesthalt psychology is over intelligent learning as contrasted with blind fumbling.

131. LEARNING PROCESS -- Gesthalt theory--achieved greatest success in field of perception. Argues for the role of background and organization. Laws of perception are applicable to learning.

132. LEARNING PROCESS (Gesthalt theory)--the law of Pragnanz--law of equilibrium similar to the principal of the maximum and the minimum in Physics.

133. LEARNING PROCESS -- (Gesthalt theory)--law of similarity--similar items or similar transitions tend to form groups in perception. Important in memory and recall.

134. LEARNING PROCESS -- (Gesthalt theory)--law of proximity--perceptual groups are favored according to the nearness of parts. Applied to memory, it becomes the law of recency. Whatever favors organization will favor learning, retention, and recall.

135. LEARNING PROCESS (Gesthalt theory) -- law of closure--applied to learning as an alternative to law of effect. The direction of behavior is toward an end-situation which brings closure with it.

136. LEARNING PROCESS (Gesthalt theory)--law of good continuation--organization in perception tends to occur in such a manner that a straight line appears to continue as a straight line, as part of a circle, as a circle, etc.

137. LEARNING PROCESS--(Gesthalt theory)--special problems of learning--role of past experiences (Trace theory)--new learning--restructuring the present field (Insight).

138. LEARNING PROCESS--functionalism--is eclectic in character and borrows from all other major theories. Dewey was the founder of official functionalism.

139. LEARNING THEORY--functionalism--functionalism is essentially a psychology of the adjustment of the organism to its environment--interested in mind-in-body and studies of psysiological substratem of mental events--functionalism is experimentalist in nature.

140. LEARNING PROCESS--factors influencing (functionalist)--masses vs. distributed practice--type of material--knowledge of performance.

141. PROBLEMS OF LEARNING (functionalism)--capacity--the increase in learning ability with age is a result of organismic maturation and changing psysiological conditions.

142. PROBLEMS OF LEARNING (functionalism)--practice--recognizes the loss in scores when a practice is overcrowded.

143. PROBLEMS IN LEARNING (functionalism)--motivation--a sign of motivation--the role of continued stimulus to be terminated by the goal--response.

144. PROBLEMS IN LEARNING (functionalism)--understanding--problem-solving and insight do not require interpretation beyond ordinary associative thinking.

145. PROBLEMS IN LEARNING (functionalism)--transfer--depends upon degrees of likeness between new and old situations. Follows Throdikian views.

146. THE THINKING PROCESS--motivation and attitude are necessary.

147. THE THINKING PROCESS--Russel's conception (Smith and Hudgins).

148. CRITICAL THINKING--related to problem-solving and creative thinking--viewed by many as a composite of attitudes, knowledge and skills.

149. CRITICAL THINKING--The Watson-Glaser Critical thinking appraisal--inference--recognition of assumptions--deduction--interpretation--evaluation of arguments.

150. CONVERGENT THINKING--the act of proceeding toward one right conventional answer.

151. DIVERGENT THINKING -- the kind of thinking that leads in different directions.

152. CREATIVE THINKING -- related to problem-solving process--occurs when isolated experiences are put into new combinations for patters--is personal--intuitive--little awareness of the process used.

153. DISCOVERY AND INVENTION -- based on intuitive or creative thinking.

154. REASONING -- deliberate choice and adoption involves conscious criticism of possible responses.

155. CHARACTERISTICS OF GOOD REASONING -- degree of emphasis on each fact--agreement of conclusion with wishes--definition of terms--examination of origin of the argument.

156. REASONING -- improves through practice--teach for transfer of reasoning--identify desirable response in form of generalization--make principles clear to students--attention to place it applies.

157. TEACHING FLEXIBILITY VS. RIGID TRADITIONAL -- influence on problem-solving--teacher prescribed solution--flexibility allows for convergent, critical divergent thinking in finding solutions possible.

158. PROBLEM-SOLVING -- based on simulation (Newell)--four methods--substitution--detachment--forward chaining--backward chaining.

159. MODELS AND THINKING -- analogy models--replica models--symbolic models--models help describe and develop understanding, to see new relationships, through prediction of success.

160. MEANINGFUL LEARNING -- components of--knowledge--comprehension--application--analysis--synthesis--evaluation.

161. RETENTION -- meaning as an aid to--the recall method--recognition method--re-learning or saving method--extinction method.

162. RETENTION -- curve of--theories of forgetting.

163. REMINISCENCE -- usually occurs over short periods of time in cases of motorskills- usually not in verbal learning.

164. RETENTION -- meaningfulness--relationship to.

165. RETENTION -- relationship to over-learning--continual use of responses.

166. RETENTION -- early relationship to and late learning, pre-active inhibition, retroactive inhibition.

167. RETENTION -- relationship to cues present during learning.

168. RETENTION -- as an active process involving changes in the memory trace.

169. RETENTION -- special use of eidetic imagery.

170. RETENTION -- a function of time.

171. THEORIES OF FORGETTING -- forgetting as a fading process or--as a repression process, as an interference process--as an extinction process.

172. LEARNING, through adventurous participation--science--do not know outcome--social studies--hypothetical problem--math--intuitive problem-solving--art--learned by grasping style--language arts--grammar experience and development of phonics.

173. LEARNING -- skill differentiated from intellectual aspect--characteristics of skilled action--differentiation of cues--feedback--coordination of movement--responsibility.

174. SKILLS -- effective practice of, selecting appropriate practice tasks--in context realistic--varied--demonstration--monitoring--practice schedule.

175. SKILLS -- rate of improvement in, learning curve--stages --negligible but increasing process--decreasing curves--plateau--renewed gains--approach to limit.

176. DISCRIMINITION -- extension to unexpected areas in unexpected ways.

177. LEARNING -- through self-activity which is psychologically sound--types--sensory experiences--memory--motorskill--problem-solving--emotional.

178. LEARNING -- must be unitary; not fragmentary.

179. DISCRIMINATION -- and generalization--meaning depends upon the reciprocal process of generalization and discrimination.

180. MEMORIZING -- value in teaching.

181. RESPONSE -- automization of, a function of practice.

182. RESPONSE -- variations in Cues and responses.

183. IMITATING -- value in teaching.

184. TERMINOLOGY OF THINKING -- recall thinking--imaginative thinking--creative thinking--reasoning--problem-solving--intelligence.

185. LEARNING PROCESS -- transfer of learning--definition--process to which obtained--nature and properties of--S/R transfer.

186. LEARNING PROCESS -- transfer--transfer depends upon identical elements present in original and new learning. May be identical in either substance or procedure. Learning is always specific never general. Appears to be general because new situation has much of old in it. (Thorndike)

187. LEARNING PROCESS--transfer--reactions to new situations, results in part by identity with old situations, and by a principle of analogy described as assimilation. (Thorndike)

188. LEARNING PROCESS--S/R transfer--response generalization--stimulus generalization.

189. LEARNING PROCESS--learning serves the future (transfer)--specific applicability to future tasks--nonspecific applicability to future tasks.

190. LEARNING PROCESS--negative transfer--retention deteriorates as the past learning activity resembles the present learning tasks.

191. LEARNING PROCESS--application of transfer to the classroom--transferability is desirable since it shortens training--pupils learn more easily.

192. LEARNING PROCESS--to teach transfer, consider objectives for instruction content, material, method, ability, attitude and skill that can be shifted to other situations used in class and to life situations.

193. LEARNING PROCESS--to facilitate positive transfer, the teacher needs to know what should and should not be taught.

194. LEARNING PROCESS--transfer depends on: intellectual response, emotional response, awareness by the teacher that the pupil may not see the relationship, (transfer that is not far fetched and a teacher not involved with trival matters.)

195. LEARNING PROCESS--misconceptions about transfer--symmetrical physical transfer--memory--sensory-motor learning--neatness--grammar--mathematics--latin--spelling.

196. LEARNING PROCESS--intelligence is positively correlated with transfer.

197. LEARNING PROCESS--transfer is a major function in learning and serves a greater function as intelligence increases.

198. LEARNING PROCESS--properties of motorskills--transfer of skills--similarity--degree of specificity--degeneration of skills.

199. LEARNING PROCESS--motorskills limited in transfer--can degenerate if not learned in actual situations.

200. LEARNING PROCESS--the results of transfer may appear at any time after the experience in the training task.

201. LEARNING PROCESS--the amount of transfer seems to increase with the amount of practice in the training task.

202. LEARNING PROCESS--the more similar the tasks or elements, the greater the transfer.

203. LEARNING PROCESS -- the greatest amount of transfer may result from the teaching of generalization and teaching the application of generalization.

204. MARKS--PROBLEM-SOLVING -- convergent thinking--divergent thinking.

205. PROBLEM-SOLVING--Barrlett's Four Categories -- close system thinking--experimental thinking--everyday thinking--artistic thinking.

206. PROBLEM-SOLVING -- Dooley's approach to scientific method.

207. PROBLEM-SOLVING -- associationist's theories.

208. PROBLEM-SOLVING -- theories of--systems of relationships--Gestalt psychology.

209. PROBLEM-SOLVING -- Maltzman theory of, intervening variables--related to habit learning and habit organization.

210. PROBLEM-SOLVING -- indication is that tests involving intellectual operations are also predictors of problem-solving behavior.

211. PROBLEM-SOLVING -- observation indicates that problem-solving ability is highly dependent on experience.

212. PROBLEM-SOLVING and group process--groups can solve problems more rapidly--some problems require more than one person to reach a successful conclusion--brain-storming (Osborne technique).

213. PROBLEM-SOLVING and communication -- the performance of a group depends upon the channels of communication open to its members.

214. PROBLEM-SOLVING and Individual differences -- measures of intelligence and reading ability have been shown to be related to problem-solving success--mental blocks (inappropriate set).

215. PROBLEM-SOLVING -- individual factors in critical thinking--knowledge background--general intelligence.

216. PROBLEM-SOLVING -- structure of--to satisfy wants or motives--hinderances--states of tension--equilibrium satisfaction.

217. PROBLEM-SOLVING -- levels of,--unlearned "instinctive" problem-solving--trial and error--insight problem-solving behavior--vicarious problem-solving behavior.

218. PROBLEM-SOLVING -- steps in--identify problem--collect data--formulate hypotheses--evaluate possible solutions--draw tentative conclusion--test tentative conclusion -- establish final conclusion--generalize and apply results.

219. CREATIVITY -- individual factors in creative thinking--there is a construction of unique products which includes originality, factors affect flexibility, and fluency as the components of creative thinking.

220. CREATIVITY AND PERSONALITY VARIABLES--high IQ pupils appear to find consistency between personal qualities they wish to possess and those which lead to social approval while highly creative pupils do not seem to need re-inforcement which comes from social forces.

221. CREATIVITY--the creative child in the classroom tends to have high IQ and a sense of humor, is inclined to be playful--may be noted by peers for his "silly" ideas--is often annoying to the teacher.

222. EMOTIONAL DEVELOPMENT--emotional life at school involves all activities and relationships with peers.

223. EMOTIONAL DEVELOPMENT--importance of the School in--intellectual achievement influenced by--achievement as a source of good feeling and self-esteem and failure as a source of anger and self-reproach.

224. EMOTIONAL DEVELOPMENT--objective and subjective aspects of.

225. EMOTIONAL DEVELOPMENT--concepts of self-acceptance and self-rejection are intrinsically related to school achievement.

226. COMMON NEEDS AND CONCERNS--physical survival--bodily comfort--sexual needs--activity drives--needs relating to selfhood--needs for self-esteem--need for affection--freedom from fear--freedom from anxiety--freedom from anger--emotional stability.

227. ATTITUDES--a predisposition to act in a given way with a given stimulus.

228. ATTITUDE--an attitude is highly personal. There can be no right nor wrong attitude per se.

229. ATTITUDE--development of, through trial and error confirmed or contradicted by experience--generalization of attitude toward life--difficult to change once firmly entrenched.

230. ATTITUDE--modifying attitude--facts--persuasion--group discussion.

231. ATTITUDE--through identification--parents--peers--teacher.

232. ATTITUDE--consistent program of reinforcing desirable attitude is necessary in the classroom.

233. MOTIVATION--definite goals should be set before instruction begins--goals must be desirable to pupils--goals should be within pupils reach--pupils must be able to judge whether or not they are attaining goals.

234. THWARTING--decreased by setting appropriate goals--excessively high standards increase the frequency--too many standards of conduct increase the frequency.

235. TENSION--problem centered exertion (desirable)--reaction to stress--tension and creative incubation (desirable)--effect of anxiety--direct and displaced discharge--suppression and related reaction.

236. SOCIALIZATION -- education as socialization, the socialization process--responsibilities of school.

237. SOCIALIZATION -- aims of, solution of personal problems in terms of available facts--self-respect and self-confidence--effective dealing with others--respect for rights of others--some absorbing goals, interest and sources of satisfaction--desire for praiseworthy action, need for action, need for critical examination of personal values before conforming.

238. SOCIALIZATION -- confidence and self-respect.

239. SOCIALIZATION -- effective relations with others.

240. SOCIALIZATION -- goals and interests.

241. SOCIALIZATION -- acceptance of social values.

242. SOCIALIZATION -- other institutional factors--the home--the church--the government--the peer group--language.

243. SOCIALIZATION -- emotional and social climate condusive for learning, recognition of emotional and social needs of students.

244. SOCIALIZATION -- relationship between pupil and teachers-- the desirable teacher personality--developing rapport--what pupils like in teachers.

245. SOCIALIZATION -- social factors influencing learning--face to face traditional groups--face to face interacting ad hoc groups--face to face noninteracting groups--non face to face noninteracting groups.

246. SOCIALIZATION -- the pupils social group, peer influences--learned roles.

247. SOCIALIZATION--social need of pupils, affection--approval by authority--approval by peers--independence--confidence and self-respect.

248. SOCIALIZATION -- physical factors in, hereditary physiological factors, (physique attractiveness)--physical environment--class status.

249. SOCIALIZATION -- social attitudes of pupils--environmental determined--parentally determined--religious and social taboos and manners--influences of contemporaries and associates.

250. SOCIALIZATION -- social roles, result of group needs--definition of sociamatrics--self-understanding of role.

251. THE ADOLESCENT AND SOCIETY -- juvenile delinquency, definition--theories in (adolescent--tradition theory, the masculine-identification theory, the culture--conflict theory).

252. THE ADOLESGENT AND SOCIETY -- juvenile delinquency, social causes--the family--the peer group--the school.

253. THE ADOLESCENT AND SOCIETY -- earlier maturation--effect of social affluence and more freedom--effects of divorce rate and familial disharmony.

254. THE ADOLESCENT AND SOCIETY -- change from rural to urban society greater breadth of experience--loosening of family ties--more variety.

255. THE ADOLESCENT AND SOCIETY -- general internal urge toward individual identity--parents instilling more confidence in children leading toward independence.

256. THE ADOLESCENT AND SOCIETY -- growth towards maturity, children's attitudes are immitative--tend to fall in line with accepted group attitudes--adolescent attitudes (more personal and individual directed although still peer oriented) --hopeful and forward looking.

257. THE ADOLESCENT AND SOCIETY -- becoming more realistic--emphasis on thinking for themselves.

258. THE ADOLESCENT AND SOCIETY -- becoming more aware of and exposed to domestic and social problems at an earlier age.

259. THE ADOLESCENT AND SOCIETY -- physical influence --physically larger--bodily and emotional maturity do not always coincide.

260. THE ADOLESCENT AND SOCIETY -- conflict between the adolescent ego and the outside world--learning to control this ego.

261. THE ADOLESCENT AND SOCIETY -- feelings are rarely displayed openly--periods of depression--depression increases from adolescence to early adulthood since adolescent fantacies are being proved as such.

262. THE ADOLESCENT AND SOCIETY -- progress from adolescence to young adulthood in many ways a blind, trial and error process. Every problem met and dealt with whatever resources the individual has available. Formal education gives little help in preparing an individual to meet the problems of life.

263. THE ADOLESCENT AND SOCIETY -- adolescents who mature earlier--middle class--college educated parents--Protestant families--small families, first-born--wife dominant families--non-domineering families--families with active father--families where father is dissatisfied with work--college oriented families--families where adolescent has strong feelings about parents--families which instill self-confidence in children.

264. THE ADOLESCENT AND SOCIETY -- problems of parent-adolescent relations--conflicting ideas(old-fashioned) --being too progressive--idea of peers vs. those of parents--adolescent attitudes--children reaching puberty.

265. SOCIETY-CULTURE -- the individual is influenced by his peers, by contempories, and by the culture in which he lives.

266. SOCIETY-CULTURE --the culture is one of the most important socializing agents in the individual's life.

267. SOCIETY-CULTURE -- society lives by ideas and communication of ideas. Society in fact, results from ideas and must depend on the circulation of facts, opinions, beliefs developed within the culture.

268. SOCIETY-CULTURE -- mass media distrbute the ideas of a culture to the individual--forms public opinion.

269. SOCIETY-MASS MEDIA -- the individual and social group are assailed by facts and fiction; by fantasy labled fantasy and fantasies labled facts.

270. SOCIETY-MASS MEDIA -- truths, partial truths, distortions, mistaken convictions, and deliberate falsehoods confront the individual everywhere.

271. SOCIETY-MASS MEDIA -- effect of magazines, radio, television, educational television, the press, books.

272. FAMILY LIFE IN A GHETTO -- school learning conflicts with home learning--way out--children see the effect of labor on adults--feelings of defeat--affiliation with religion and little correlation with life--little to go home to--low moral structure--questionable value structure.

273. FACTORS OF ACULTURATION -- retaining old-work attitudes--influence of economic status--occupational influence--educational influence--cultural influences--influence of intra-family relations--sibling relationships--size of family.

274. GROWTH AND DEVELOPMENT -- birth through two and a half years--psysiological factors of motor development, language development, adaptive behavior, personal-social behavior (see Gesell,Arnold).

275. GROWTH AND DEVELOPMENT -- two and half through five years--period of marked psysiological growth--behavior--language--personal--social behavior--motor characteristics--(see Gesell, Arnold).

276. GROWTH AND DEVELOPMENT -- age 5--the model age--good balance between health and environment--emotionally well-organized--preliminary version of the ultimate adult.

277. GROWTH AND DEVELOPMENT -- age 6--solving new problems of development--bipolar phase, attempts to self and new environment.

278. GROWTH AND DEVELOPMENT -- age 7--less stability--capacity to learn and organize--firm relationship with peers and teachers--more unipolar--less disequilibrium.

279. GROWTH AND DEVELOPMENT -- age 8--budget of income and outgo shows new balances--shows initiative and spontaneity in meeting environment--fraternizes with co-equals.

280. GROWTH AND DEVELOPMENT -- age 9, 10--extremely independent--growth of self-reliance--has acquired intensified group feelings--diversion between the two sexes is widening--the child has become a youth.

281. GROWTH AND DEVELOPMENT -- growth gradients--series of stages or degrees of maturity through which a child progresses toward a higher level of behavior.

282. GROWTH AND DEVELOPMENT -- the parent-child-teacher relationship--parent-child is based on heredity--teacher-child on authority--emotional bonds stronger between parent and child.

283. GROWTH AND DEVELOPMENT -- 11, 12, 13--pre-pubescence.

284. GROWTH AND DEVELOPMENT -- 14, 15, 16, 17--period of adolescence.

285. EVALUATION -- differences between evaluation and testing.

286. EVALUATION -- evaluation as an all-encompassing process of placing value on student achievement, educational techniques, instructional materials, and original objectives.

287. EVALUATION -- intelligence testing.

288. EVALUATION -- achievement testing.

289. EVALUATION -- sociometric devices.

290. EVALUATION -- self-evaluation.

291. EVALUATION -- evaluation of the curriculum as an outgrowth of evaluation.

292. EVALUATION -- test construction.

293. EVALUATION -- grading.

294. EVALUATION -- evaluating individuals on the basis of their achievement rather than their relativity to group norms.

295. EVALUATION -- anecdotal records.

296. EVALUATION -- standardized testing--total school program.

III. SUGGESTED ACTIVITIES FOR PRE-SERVICE TEACHER EDUCATION STUDENTS

1. Develop a lesson entitled "Looking Toward Your First Job." Set up interview situations; have one student interview another for a position and vice versa.
2. Have individual students work on particular skills needed.
3. Construct an interest questionnaire for students. Identify specific interests for each student.
4. Discuss specific cases or problem students with experienced teachers or guidance counselors. Construct a case study from many points of view represented.
5. Accompany students to library. Work with individual students in selection of reading material. Each student should have some specific assignment requiring the usual reference materials.
6. Have small groups of students prepare committee reports.
7. Accompany students on field trips in supervisory capacity.
8. Ask individual students to identify their own characteristic weaknesses. Analyze these with students.
9. Interview individual students with specific personality variables in mind. Construct case studies.
10. Become familiar with permanent record folders. Spend some time in guidance office.
11. Administer achievement, personality, or aptitude tests to students. Discuss and analyze the results of these tests.
12. Design a project of value to several individual students. Give salient variables about these students and discuss why the project might be valuable.
13. Have students construct achievement tests for themselves or other students at termination of units.
14. Analyze achievement tests. Identify general class weaknesses and individual weaknesses.
15. Have students use a tape recorder to indicate orally various processes. By replaying, faults can be found.

16. Select students who have great difficulty in verbal problems. Have each student think aloud and record thoughts on tape. Constructively appraise his approach.

17. Work with individual students in tutorial situations.

18. Introduce a unit. Preplan the unit on the basis of class makeup and carry on pupil-teacher planning. Select individual objectives, subject matter, etc., based on pupil-teacher planning.

19. Describe a class. Give salient learning characteristics for each student in the class.

20. Participate in, observe, or conduct a parent-teacher consultation and evaluation.

21. Listen to tapes of counseling sessions involving students with problems or students with whom you are working.

22. Utilize "role playing" or other impromptu dramatic or sociodramatic activities.

23. Investigate sociometric devices available to the teacher. Administer one or several different sociometric devices and analyze results.

24. Observe or supervise playground or lunchroom activities. Observe students "playing" different social roles.

25. Evaluate students in terms of oral presentations.

26. Work with several students in terms of those student's self-evaluation.

27. Organize small group discussions. Identify and show how you would deal with overt personality differences, etc.

28. Evaluate long term assignments done by students. Evaluate in terms of each individual's potential and characteristics.

29. Observe or become involved in various extra-curricular activities such as sports, etc. Become aware of different psysiological nature of various students and what bearing it has upon the "whole" student.

30. Have students construct a list of leisure time activities. Analyze these activities in terms of their appropriateness and, if necessary, suggest more appropriate for various pupils.

31. Evaluate and describe various job and educational patterns of the community.

32. Describe, analyze, and record outstanding physical defects or abnormalities which may affect individual behavior. Suggest appropriate activities, subject matter, etc., in terms of these abnormalities.

33. Compare the potentiality, personalities, etc., of various students based on information gathered about the home, the community, etc.

34. Identify and analyze factors causing differences among students.

35. Make a list of the most observable differences in a given class of students. Analyze these differences in terms of their value.

36. Permit students to make individual choices for reading rather than having the same book read by the entire class.

37. Have students collect, edit and duplicate material they have written.

38. Have class members write biographical sketches of themselves. Compare sketches written at the beginning of the year with those written at the end of the year.

39. Have students interview the school principal, department heads, etc., and construct a working format of the school operation.

40. Have students collect samples of writing by various authors, compare language used with current language teaching.

41. Use programmed learning devices related to specific skills.

42. Supervise a homeroom period.

43. Have students construct and keep records of types of problems they find difficult. Use graphs to show the individual student the area in which he is weak.

44. Assign individualized homework related to areas of deficiency.

45. Group a class for instruction on the basis of achievement in an area.

46. Review a homework assignment for an individual student.

47. Analyze standardized test results with individual students.

48. Identify students in mathematics who are having difficulty because of reading problems.

49. Construct individual achievement tests for students of differing abilities.

50. Have individual students analyze efficient methods of study, research, etc.

51. Have individuals and small groups list activities they would like to do. Have them construct a list of questions they would like to have answered in a particular unit.

52. Have individual students assist in previewing films for particular units.

53. Have individual students organize a reading-interest center, developed around seasonal, special interest, unit, etc., themes.

54. Have individual students select a long-term project, give individual help; when needed.

55. Develop a seating arrangement and grouping arrangement taking into account learning variables, personality variables, result of sociometric testing, etc.

56. Supervise a laboratory, giving individual help to students requiring it.

57. Initiate a small group seminar-type discussion concerning a controversial topic in science such as smoking, eating habits, etc.

58. Encourage interested students to write defense of a controversial science topic, e.g., type of evolution, etc.

59. Work with English teachers on topics for students to choose for research paper to be written in the style required for a particular scientific journal.

60. Work with individual students in school library showing them how to use various scientific indexes, abstract indexes, journal indexes, etc.

61. Plan a review for a class on a particular unit. Work with individuals in reviewing.

62. Genetics-trace the occurance of some family trait e.g., P.T.C. tasters, freckles, hair color, etc.

63. Analyze a community, in terms of pressure groups, socioeconomic level, occupations, etc.

64. Have small groups in preparing sociodramas for presentations to the class. The sociodramas could be based on almost anything the students desire.

65. Observe small groups in the classroom and record in what ways the individual pupil and the groups are different.

66. Observe a class for several days and make suggestions of ways of varying the seating arrangement which might encourage students to participate more freely and actively in the class.

67. Use a tachiatoscope to evaluate various students reading speeds, comprehension, and vocabulary.

68. Work with individual student or students who have been absent from school for a long period of time

69. Observe or work with a team in a team-teaching situation. After observation, make suggestions as to possible individualized learning activities for specific students.

70. Scale a group of students on a "like-dislike" basis. Honestly decide which students you like best and which students you like least and why.

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71. Develop or select various challenging problems which might be of interest to superior students.

72. Help the class invent a new consumer item. Have individual students go through all steps of design, planning for patent, manufacture, sale, advertising, accounting, etc.

73. Develop and use "contract method" with one or two units. Custom tailor contracts to individual students; using pupil-teacher planning.

74. Have individual students discuss, analyze and interpret the phrase that "All Men Are Created Equal."

75. Make a collection of instructional materials associated with one unit topic representing a very broad approach and multilevel difficulty.

76. Administer Kuder interest inventory and form hypothetical groups on the basis of interests.

77. Listen to tapes of guidance session with individual students evidencing various kinds of problems, difficulties, desires, and aspirations, etc.

78. Prepare a test designed to measure a pre-selected student's progress. Tests should be compatible with salient learning variables.

79. Have students undertake some community planning project. Organize into small groups who have the responsibility for different sections of the community. Work in designing, architecture, etc.

80. Have students analyze and choose a specific local cause and actively support it, e.g., playgrounds, slum clearance, etc.

81. Develop with students a mathematics laboratory containing the materials and equipment which would best encourage, motivate and involve individual pupils.

82. Review films on mathematics. Select films that might be apropos for students with varying interests and abilities.

83. Have students write a short character analysis and physical description of themselves as if it were part of a book or short story. Have students place themselves in some situation.

84. Stagger the due dates on essay assignments to provide yourself with more time in correcting and evaluating the essays.

85. Secure in paperback or other inexpensive book form, a worth-while book. Give each student one page from the book. Allow each student to write a synopsis or condensation of this page out of context.

IV. SUGGESTED ACTIVITIES FOR PRE-SERVICE TEACHER EDUCATION STUDENTS INTERESTED IN WORKING WITH PUPILS IN SCHOOLS

1. Organize the class in pairs of students. Have students in pairs alternately act as critic or coach for their fellow student in the presentation of some oral report.

2. Have individual students prepare an oral reading selection to be presented to the class.

3. Have students select some object, card, photograph from their wallets, pockets or purses. After preparation time, have individual students speak for three minutes on various reasons why they are carrying this object with them or what significance it might have for them.

4. Have students prepare a newspaper of their own. Assign individual students separate functions. Work with individual students toward the preparation of the paper.

5. Assign debate topics to small groups of students to be presented in class. Work with individuals and small groups toward the presentation of these topics.

6. Have the students set up a corporation, select officers, board of directors, distribute shares, etc.

7. Organize a current events club.--Study newspaper clippings and discuss news events.

8. Have students prepare a notebook on current decisions made by local, state, and federal courts and interpret these decisions.

9. Assign legal cases to committees in a business law class and have committees hand decisions down to the class.

10. Arrange a court trial scene. Have students portray the plaintiff, defendent, lawyers for both sides, jury and the judge.

11. Have students in a business class invest an imaginary sum of money in stock market. Have individual students read and interpret stock market reports, etc.

12. Have students in a shorthand class tape different voices for dictation and present this to the class. Have the tapes at different speeds and also have male and female voices.

13. Select students to become "teacher of the day" to present daily lesson. Work with these students individually to prepare these lessons.

14. Use "role reversal" technique. Teacher plays the role of the student and student assumes the role of teacher. Pre-determine some problem which will be discussed in the interview.

15. Visit homes of students.

16. Have individuals and small groups of students prepare bulletin boards and displays of current events material, etc.

17. Have individuals and small groups of students organize extra curricular clubs.

18. Use "the anti-type casting" technique. Assign a student the role to play which will force the student to adopt a character train, etc., directly opposite some trait or mannerism displayed by the student. Work with the student as he attempts to carry out the role.

19. Have each student select a short passage from some play, story, poem, etc., which appeals to him. Have the student present this to the class and discuss his reasons for choosing it.

20. Have students use a tape recorder to record "cold" oral readings. Discuss problems with students.

21. Assign excerpts from great speeches, etc., to various students. Ask students to "play the role" while reciting these selections.

22. Have students prepare speeches. When speeches are prepared ask students to present a speech prepared by another student. Discuss difficulties in doing this.

23. Prepare an 8 mm movie of a one-act play. Assign students various roles, etc.

24. Develop a "Check-List for Effective Speaking Techniques." Have students rate themselves as teacher also rates them. Discuss with each student the differences and similarities between the ratings.

25. Have students select famous characters from literature who most resemble them. Have students develop dialogue or use written dialogue for this character in a class presentation.

26. Have students edit or re-design a newspaper article improving it in some way. Students should give reasons for their improvement.

27. Have students study, and report why, certain occupations in industry, professions, etc., may be of interest to them.

28. Have students select different industries and make analytic studies for class presentation.

29. Have students select different industrial processes and report.

30. Have individuals or small groups of students construct a working model or mockup of various industrial processes.

31. Have students bring in collections of or samples of materials of industry.

32. Have students in small reliable groups, make blood smears of their own blood. Arrive at blood group determination, Wright's staining, and RBC counts.

33. Have students interested in photography make slides or moving pictures on some aspect of science, e.g., plant growth, kinds of plants and animals, rock formation, etc.

34. Help students interested in a scientific career. Find summer or part-time work having connection with their interest. Various books on student employment can be found in the guidance office.

35. Help students correlate their reading with other school subjects.

36. Supervise a reading period, move about the room giving individual help, ask questions and make comments.

37. Have small groups of students dramatize scenes or events from their reading of literature of periodicals.

38. Have students construct vocabulary lists from difficult vocabulary encountered in their reading.

39. Have interested students organize a book buying, promoting and selling program or a paperback exchange.

40. Have students develop a notebook for listing speech problems or speech errors or grammatical errors which must be overcome.

41. Organize a classroom debate. Select students who have different opinions. Help students arrange material for presentation.

42. Initiate a "meet the press" program in class. Assign students to act as guests and pressmen.

43. Have students choose a book to "sell" to the class. Schedule time in in class for various students to "sell" these books.

44. Organize a choral speaking group to dramatize stories, plays, etc. Individuals or groups may wish to adapt stories to this medium by rewriting or creative writing.

45. Have students use business letters to answer want ads in newspapers and magazines, to schedule job interviews, or to advertise items for sale.

46. Have individuals contribute sentences or groups of sentences to an essay to be placed on the board. Make corrections as the essay is written or or after it has been written.

47. Have students make puzzles with spelling and vocabulary lists. Arrange a contest in which these puzzles are used.

48. Have members of class exchange essays they have written for comments from their peers.

49. Have students interview adults and write themes entitled "What the World was like in 1946."

50. Have individual students and small groups prepare a chart of important world conferences listing name, date, countries involved, etc.

51. Have small groups form into clubs such as "Foreign Newspaper Correspondence Club," "United Nations Representative Club," etc.

52. Have individual students write creative themes about life in other countries.

53. Have individual students prepare creative themes on what democracy and communism means to them.

54. Have students construct a large mural showing the ways of living and the ways people earn a living throughout the world.

55. Have individuals and small groups construct a "time-line" for some period of history.

56. Have individuals and small groups construct a large cardboard map of the world. Shade in member nations of the U. N. headquarters, etc.

57. Have students prepare a panel discussion comparing democratic and communistic ideologies.

58. Have individual students read and discuss editorial reaction in different countries to events taking place in the world.

59. Have individual students do research to compare science and technological growth in both communist and democratic countries. Present this research in class.

60. Have individual students draw maps showing the countries in NATO, SEATO, Warsaw Pact, etc.

61. Have individual students make a display of the constructive and destructive uses of atomic energy.

62. Have students select and report sequentially on topics in unit area from biographical to developmental concepts. Topics should represent the growing field of science, i.e., Hippocrates to Salk -- 2400 years with the microbe, etc.

63. Have students select and report on a communicable disease. Include its histroy, spread, intermediate host, cause, symptoms, treatment and/or cure. Encourage students to use library and several sources.

64. Identify a number of initial discoveries related to basic concepts of electricity such as the Greeks or Chinese and magnetism. Franklin and electricity, Galvani and the battery, etc., and have individual students write short skits of the discovery and principal.

65. Have students, especially interested in atomic structure, write a short skit presenting the historical development of atomic theory, Democritus, Aristotle, Socrates, Dalton, Bohr, Einstein and others.

66. Have a student research and present a talk on development of Mendeleey's periodic chart, his predictions, and the gradual discovery of expected elements.

67. Have students read sections of elementary chemistry text dealing with kinds of solutions. Have them make up examples of saturated, supersaturated and diluted solutions.

68. Have the more quantatively-minded student do research and make up specific concentration of solutions, e.g., molar, molal, and normal.

69. Have students construct atom models from simple materials early in the unit on Atomic Structure and Atomic Energy. Represent several different elements. Permit students to explain structure.

70. Assign students in weather study a specific section of bulletin board to post daily information, comparative figures for previous year and the average for area records.

71. Have students keep a bulletin board weather map based on the "Today Show" information of frontal positions, precipitation, etc., Using construction paper cutouts for weather symbols.

72. Have students select a particular occupation of interest. Help them prepare a written report on this occupation as a result of their investigation.

73. Act as group discussion leader in a discussion involving various occupations which might be of interest to individual students.

74. Involve students in experimentation with various kinds of electronic equipment giving assistance when needed.

75. Have students do demonstration for the class e.g., hydrogen sulfide generator with various metal oxides to show the color changes.

76. Perform a live rat disection, assign various organs, etc., to individual students for analysis.

77. Arrange interviews for individual and small groups of students with leaders in the field of science, engineers, etc.

78. Arrange field trips for students to nearby colleges, visit laboratories, professors, etc.

79. Have students read scientific books or articles and report the contents to the class.

80. Have interested individuals in make a terrarium or aquarium with materials obtained from the students surroundings, field trips, etc. Encourage students to keep a record of the contents of the habitat.

81. Encourage students with literary interests to write articles for the school newspaper or publish a separate subject newspaper for the school.

82. Initiate the building of models by interested students for a school or state science fair.

83. Have students display books and report on books which they have read and enjoyed.

84. Start a classroom aquarium. Have students in class observe, take notes and compare notes on the changes occuring within the aquarium.

85. Have students list all foods they consumed the previous day. Analyze and compare diets.

86. Have students write on the topics: "What I want to be when I grow up," "The best teacher I ever had," "Three wishes I wish would come true," "My family," "How I plan to succeed," etc.

87. Have students organize a talent show.

88. Have students bring their hobbies into class and discuss them.

89. Have students write songs in a foreign language. Work with musically oriented students in writing music for the songs.

90. Form teams and play the word game "Scrabble" setting a time limit. Organize a contest.

91. Interest individual students in acquiring penpals in foreign countries where the target language is spoken. Assist students in writing letters.

92. Have students select "Tape Pal" in a foreign country. Assist students in preparing "scripts" before using tape.

93. Have individuals and groups of students investigate and perhaps present a debate on the pros and cons of installment buying.

94. Have more capable students set up a "mathletic" league. Work with this group in terms of providing competitive devices.

95. Divide class into small groups to work on, identify, and clarify mutual math difficulties. Analyze the results of these group meetings.

96. Have more able students select enrichment material for various units.

97. Have students interested in athletics apply mathematics and physical principles to various athletic endeavors.

98. Play for the class a famous musical selection e.g., Nut Cracker Suite, etc. Have students jot down thoughts as they listen to music. Have them construct these thoughts into a theme.

99. Have individual students prepare a two or three minute news broadcast using current news items.

100. Have individual students make a chart showing how the state and/or federal government spends its tax dollars.

101. Have several students read the same poem or verse ascribing to it different meanings through inflection, etc. Have class analyze various differences.

102. Have students write a poem about the teacher. Give them freedom to be complimentary, satirical, etc.

103. Have individual students write a letter to a friend in Boston just after the closing of the harbor.

104. Have individual students write a letter as an Englishman would write to his agent in China explaining that he cannot transfer him to the colonies because England has lost the colonies. Explain the blunders England made in dealing with the colonies.

105. Have individual students write a newspaper account of the repeal of the Stamp Act.

106. Have individual students examine the want ad section of a local newspaper, discover what type of jobs are available most often, etc.

107. Select a recognized literary work for each student in a class which most closely approximates his interests reading level, and abilities.

108. Have each student create, after reading a book, a book-cover which incorporates the main theme or central character of the book.

109. Have students select some character from a literary work and write a monologue for this character.

110. Have students write a critical analysis of either their favorite TV show or the TV show they dislike most.

111. Have students analyze television commercials.

112. Have students select from a famous literery work such as Shakespeare, etc., any portion of the work which they think they can improve and rewrite this portion with their improvements. Have the rewrites presented in class and analyze.

113. Have students explain the meaning of this statement: "The Reasonable Man Adapts Himself to the World; The Unreasonable One Persists in Trying to Adapt the World to Himself. Therefore, all Progress Depends Upon the Unreasonable Man."

114. Have students prepare oral reports on the attempts of advertising agencies to influence teenage consumer attitudes. Illustrate reports with advertisements, etc.

115. Choose class members to present arguments between one of the "King's Friends" and a colonial over the English belief that the colonies existed for the benefit of the mother country.

116. Have students decide upon some person past or present whom they admire. Ask them to explain orally or in writing why they made that choice.

117. Have students draw plans and write descriptions for settling a colony on Mars.

118. Have students list five rights from the Bill of Rights which they think are most important. After each give reasons for their selection.

119. Have a student play the role of Karl Marx. Assign other students to interrogate him as to his philosophy.

120. Have students devise their own insurance plans, perhaps on their own families' financial situation.

121. Have students interview several local businessmen. After these interviews have students give reports in class on the findings of the interview.

122. Have students devise different types of bills and invoices. Have students devise their own filing system for these bills and invoices.

123. Have students choose a particular type of business and set up inventory records.

124. Have students who are members of school organizations plan school events, items that will be acquired, and keep records of cost, how to order, who to order from, etc.

125. Have students fill out self-evaluation sheets on job personalities.

126. Conduct mockup job interviews. Assign students the role of interviewees and employers.

127. Have students develop work folders in which all composition work throughout a year could be kept in order that individual students can assess their own growth and progress.

128. Using the SRA Reading Lab., have students check themselves as to their approximate reading level. Select appropriate materials for reading.

129. Have students write their own poems in a foreign language and translate them back into English. Have discussion about the impact upon the meaning, beauty, etc., loss or gained in translation.

130. Have students prepare reports on the influence of mathematics in other fields, e.g., science, music, art, ballistics, etc.

131. Have students design anti-advertising in terms of smoking, alcohol, etc.

132. Have students design advertising posters, etc., for various products.

133. Have student design one room in his home as he would like to see it.

134. Have student sketch a picture of his family tree on a duplicated map of the world.

135. Interview each pupil in an informal setting: hobbies, travel background, interest, friends, etc.

136. Have students make a glossary of words, slogans, and expressions; e.g., iron curtain, peaceful coexistance, fission, neutralism, UNESCO, etc.

137. Have committees and individuals do research and write reports comparing views of organizations and groups both friendly and hostile to the United Nations.

138. Have students take the part of different countries, enact a dramatic presentation of a United Nations general session.

139. Have students write articles about the Communist rise to power.

140. Have students write and direct a play depicting a meeting of Russian and American officials at the U. N.

141. Have students record radio and television programs on such subjects as Viet Nam, Red China, Cyprus, NATO, etc.

142. Have students write letters to Embassy offices for information about Communist countries, neutral countries, democratic countries, etc.

143. Have students write to other boys and girls in both democratic and Communistic countries through the student letter exchange.

144. Have students construct a salt-flour map of their area. Show old roads, farms, and landmarks. Indicate location of present schools, churches, and homes.

145. Have students construct a scale model of Pan American Exposition of 1900.

146. Have students present plays on different periods of history. Student participation could include: costumes, scenery, music, characters, stagehands, writers and directors.

147. Have students construct a scale-down reproduction of some great battle of American history, i.e., Lee at Gettysburg, etc.

148. Have individual students prepare a model of a Utopian city as it might have been in the Socialist mind.

149. Have students prepare a map of the land expansion and acquisition of each section of the U. S. beginning with the 13 Colonies.

150. Have students prepare a debate involving 36 students representing our past presidents. Debate issues of today and have each President discuss the issue from his period of history.

151. Have individuals and small groups establish a model congress. Have the congress pass some bill.

152. Have small groups of students work on a project showing the results of the Progressive Era: Use bulletin boards, show the before and after, discuss Progressive Period.

153. Have individuals and small groups prepare for a "College Board Quiz." Have students prepare questions and answers.

154. Have students prepare a time capsule for each century from the 1600's to the 1900's.

155. Have individuals and small groups develop an American History Fair.

156. Have students prepare skits involving history as comedy: flashback news reel, etc.

157. Have students construct a museum of early American history. Consider models of firearms, clothing, household implements, etc.

158. Have students draw cartoons about American History.

159. Have students develop a model of a typical town meeting in the early 1900's.

160. Have students do research involving Presidential families: wives and children of our Presidents; families at the White House; changes made at the White House during each administration; interesting facts about families.

161. Have students develop a Montage depicting history of the United States.

162. Have students design monuments (plaster of paris) representing events in history.

163. Develop a newspaper patterned on the contemporary newspaper, but written as it occured in some period of history under study, e.g., French Revolution, American Revolution. etc.

164. Have individual pupils write recipes or prepare food representative of historical periods.

165. Work with individuals and small groups in the construction of a model, Utopian city and city government. Consider political structure, and physical structure. Assign individuals different roles, e.g., mayor, streets director, chief of police, etc.

166. Have students select one interest or past activity from interest lists, or interest inventories that has great appeal to them and write a short essay about this interest.

167. Have pupils write a character analysis and description of the teacher.

168. Have students write character analyses and descriptions of their parents, friends, brothers, sisters, etc.

V. INSTRUCTION MATERALS

1. Film -- "Black Board Jungle." A commercial motion picture.

2. Film -- "Learning about Learning." A Film in the FOCUS ON BEHAVIOR Series, Available in the Audio-Visual Dept. of the State University of New York at Buffalo.

3. Film -- "How Children Develop a Conscience." A Study in Behavior narrated by John Darey for the American Psychology Association.

4. Periodical -- "How Not to Make an Assignment," N.E.A. JOURNAL (October, 1964), pp. 49-52, Van Til, William.

5. Periodical -- "Discipline? Follow the Yellow Brick Road," N.E.A. JOURNAL LIII No. 7, (October 1964), pp. 52-54 Agnew, Ruth

6. Periodical -- "The Idea of Learning as Development of Insight," EDUCATIONAL THEORY, II, (April, 1952), pp. 65-71; also found in READINGS. pp. 39-45, 1964, Bayles, Ernest B.

7. Periodical -- "Automation and the Dropout, The School's Responsibility," SOCIAL EDUCATION XXVIII, (November, 1964), pp. 391-394, Rogers, Virgil M.

8. Periodical -- "What is a Creative Teacher?" N.E.A. JOURNAL Vol. LIII (September, 1964), pp. 8-10, Wenzel, Evelyn

9. Periodical -- SCHOOLS OF TOMORROW -- TODAY!: A REPORT ON EDUCATIONAL EXPERIMENTS, (Prepared by the New York State Education Dept., New York, Yale University Press, 1960,) Morse, Arthur D.

10. Periodical -- "Developmental Differences," FOCUS ON BEHAVIOR Series (American Psychological Association).

11. Periodical -- "The Social Animal," FOCUS ON BEHAVIOR Series (American Psychological Association).

12. Periodical -- "Values of Our Youth," TEACHERS COLLEGE RECORD, LXIII (Dec., 1961), pp. 211-219

13. Periodical -- "On The Theories and Problems of Adolescence," Journal of Genetic Psychology, LXXXV, First Half (September 1954)

14. Periodical -- "Children Look at their Own Behavior," NATIONAL EDUCATION ASSOCIATION JOURNAL Vol. LIII, No. 4 (Sept., 1964), p. 14, Lippitt, Ronald and Peggy and Fox, Robert

15. Periodical -- "Teachers of the Poor," THE P.T.A. MAGAZINE Vol. LIX No. 5 (Nov. 1964), pp. 12-15, Reissman, Frank and Arlene

16. Periodical -- "The American Student as I See Him," FORM AND THOUGHT IN PROSE by Stone, Wilfred and Hoopes, Robert (New York: Ronald Press Co., 1954), Highet, Gilbert

17. Periodical -- "Suicide in Childhood and Adolescence," NATIONAL EDUCATIONAL ASSOCIATION JOURNAL Vol. LIII (November, 1964), pp. 32-33, 54-55, Clark, Marguerite

18. Periodical -- "Classroom Incident: What Would You Have Done?" NATIONAL EDUCATIONAL ASSOCIATION JOURNAL, Vol. LIII (October, 1964), pp. 25-26

19. Periodical -- "Feelings Count," CHILDHOOD EDUCATION XXXVII (Nov. 1960) pp. 123-124. Tinsley, Gladys M.

20. Periodical -- "Do We Push Children," CHILDHOOD EDUCATION XXXVII (Nov., 1960), pp. 108-112, Keliher, Alice V.

21. Periodical -- "Recreation for Emotionally Disturbed Children," THE PHYSICAL EDUCATOR Vol. XIX (October, 1962), Wargo, Gerald J.

22. Periodical -- "Helping the Stutterer," NATIONAL EDUCATIONAL ASSOCIATION JOURNAL, XLIX (November, 1960), pp. 35-36, Naylor, Rex.

23. Periodical -- "Some Psychological Factors In Motivating Handicapped Students in Adapted Physical Education," THE PHYSICAL EDUCATOR. Vol. XIX (December, 1962) pp. 138-140 Schoon, John R.

24. Periodical -- "Boredom, the Unhidden Enemy," FRENCH REVIEW, XXXVII (January, 1964), pp. 343-48. Obuchowski, Chester W.

25. Periodical -- "Transfer Facilitation," EDUCATION Vol. LXXXII (December 1961), pp. 235-237.

26. Periodical -- "Re-examination of Transferability of Skills," MONTHLY LABOR REVIEW, Vol. LXXX (July-August 1957), pp. 803-810, pp. 938-948.

27. Periodical -- "Experiments in Discrimination," SCIENTIFIC AMERICAN, Vol. CXCVIII (January 1958) pg. 77-80. Guttman, Norman and Kalish, Harry

28. Periodical -- "Curriculum Guidance for High School Students," THE SCHOOL AND SOCIETY, Vol. LXXXIX (April 8, 1961) p. 183. Spellman, C. L.

29. Book -- Short Story: "Times Square Kid," from TRUE TALES FROM THE ANNALS OF CRIME AND RASCALITY, (New York: Random House, 1951), McKelway, St. Clair.

30. Book -- EDUCATION AND SOCIETY, (Columbus, Ohio: Charles E. Merrill Books, Inc., 1963), Kallenback and Hodges, ed.

31. Book -- EVALUATION IN MODERN EDUCATION, (New York: American Book Co., 1956), Wrightstone, Justman, Robbins

32. Book -- THE SABOR-TOOTH CURRICULUM, Peddiwell, J. Abner

33. Book -- HOW TO LIVE WITH YOUR TEEN-AGER. (New York: McGraw Hill, 1953, Chapter III, pp. 22-23), Baruch, Dorothy W.

34. Book -- SOCIAL CLASS INFLUENCES UPON LEARNING, (Boston: Harvard University Press, 1948), Davis, Allison

35. Book -- HUMAN DEVELOPMENT AND EDUCATION, (New York: David McKay Company, Inc., 1953), Havinghurst, Robert J.

36. Book -- INDIVIDUALIZING INSTRUCTION, (61st Yearbook of the National Society for the Study of Education, Part I, 1962)

37. Book -- OF HUMAN BONDAGE, (Pocket Books, Inc., New York: 1964), Maughaum, Somerset

38. Book -- "The American School: What's Wrong and What to Do," from HOW TO GET THE BEST EDUCATION FOR YOUR CHILD (New York: G. P. Putnam's and Sons. 1959), Fine, Benjamin and Fine, Lillian.

39. Book -- "To Teach is to Inspire," from WHY TEACH? by Louise D. Sharp, (New York: Henry Holt Co., 1957), Cousins, Norman

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41. Book -- FRUSTRATION AND AGGRESSION: IN ADOLESCENCE, (New Haven, Yale University Press, 1949), Dollard, John, et.al.

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43. Book -- CHILDHOOD, BOYHOOD, AND YOUTH, (New York: McGraw Hill, 1965), Tolstoy, Count Leo

44. Book -- THE MAGIC YEARS, (New York: Charles Scribner's Sons, 1959) (Child Development 1-5 years), Fraiberg, Selma

45. Book -- WHERE DID YOU GO? OUT. WHAT DID YOU DO? NOTHING, (New York: Affiliated Publishers, 1959), Smith, R. P.

46. Book -- GROUP DYNAMICS, (New York: Ronald Press Co., 1959), Bonner, Hugh.

47. Book -- EDUCATIONAL PSYCHOLOGY, Third Edition, (New York: The Macmillan Co., 1949), Gates, Arthur

48. Book -- EDUCATIONAL PSYCHOLOGY, (New York: American Book Co., 1948), Crow, Lester

49. Book--TEEN-AGE TYRANNY, (New York: Morrow, 1963), Heichinger, Grace and Fred

50. Book--THE GIFTED CHILD GROWS UP, (Stanford University Press, Stanford, California, 1947), Terman, Lewis M., and Oden, Melita H.

51. Book--THE ADOLESCENT THROUGH FICTION, (New York: International Universities Press, 1959), Kiell, Norman

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54. Book--BLACK LIKE ME, (Boston: Houghton Mifflin, 1961), Griffin, John Howard

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59. Book--THE SANE SOCIETY, (New York: Rinehart, 1955), Fromm, Erich

60. Book--CULTURE AGAINST MAN, (New York: Random House, 1963), Henry, Jules

61. Book--DELINQUENTS IN THE MAKING, (New York: Harper and Brothers Publ., 1960), Glueck, Sheldon and Eleanor.

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64. Book--TEACHING SOCIAL STUDIES IN HIGH SCHOOL, (Boston: D. C. Heath, 1964), Wesley, E. and Wronski, S.

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